The Journal of the
American Medical Association

VOL. XXXII. CHICAGO, ILLINOIS, JANUARY 28, 1899. No. 4.

ADDRESS.

SOCIAL FORCES OF TODAY AND THE FUTURE OF THE MEDICAL PROFESSION.

President's Address read before the Detroit Academy of Medicine, Oct. 11, 1898.

BY DAVID INGLIS, M.D.
DETROIT, MICH.

Fellows of the Academy:—The annual presidential address is, by common custom, devoted to the consideration of general rather than special matters, and it seems, therefore, fitting, tonight, to consider such a subject as I have stated.

Our fathers in theology hewed each other valiantly in trying to reconcile the problems of free will and foreordination; our scientific friends are even now in an endless contention over the relative influence, on the individual, of heredity and environment. Insoluble problems as these are, there is yet a compromise solution. We can not separate the two factors; both work their results together. Life and conduct are the tangential results of double sets of forces. Today the struggle of individualism and socialism affords another illustration of two apparently opposing principles working out a common result.

What influence does the present trend toward socialism seem likely to exert upon the medical profession? I say the present trend toward socialism, for both the friends and foes of socialism agree that the trend toward socialism exists. Herbert Spencer sees the inevitable advent of socialism in sorrow, and calls it the "coming slavery." Morris sings the coming socialism as the dawn of happier days. The enlargement of the functions of society to the lessening of the play of the individual, is a fact not to be ignored. The public school, the postoffice, the steady centralization and unification of our States into a Nation: these, and many similar examples, serve to demonstrate how inevitable is the great movement of our time by which the individual is compelled to become but a part of an organic whole. The rapid taking over by the State, of railroads, telegraph, telephone, insurance and other businesses in Great Britain and Europe, and the growing sentiment in this country in favor of such enterprises, shows a world-movement. Not by dreamers nor by agitators is the movement either begun or kept up; these are but products of the movement. In itself it is simply an evolution, and like other phases of evolution, it is irresistible—no man can hasten nor retard it.

How does this movement affect the medical profession? In many ways. It is affecting us at the outset in the very matter of being allowed to practice at all. From the standpoint of the individualist there should be no infringement of the liberty of any individual to practice medicine, or to employ any other individual he pleases to practice upon him. Moving along on the broad current of the times, however, State examining boards are gradually reducing the area of the medical individualist. In almost all civilized countries the State control of the right to practice medicine is acknowledge and established. In our own country, despite occasional struggles of the individualists, the progress seems to follow the current, so that it seems practically inevitable that society will limit the right to practice medicine to qualified practitioners. To those whose souls are disturbed by the liver-pad, blue glass, Christian Science, and the unborn ephemera of medicine, the confidence that, no matter how rough the eddies, the stream flows on, may lend some encouragement.

Michigan physicians, it is true, need some cheering up on these lines, for Michigan seems to be a pretty big eddy, a sort of Sargasso Sea, in which drift about a lot of weeds and wrecks, washed in from all the neighboring seas. As the biologist finds in the Sargasso Sea a most interesting and varied collection of vagrant plants and animals, so in Michigan, the observer can find the most varied collection of vagrant practitioners of medicine. Still we may take heart and hope that the steady stream of socialism may reach us and purify us. While disclaiming any desire to make socialists of you, I think it may not offend if I urge you to use your influence to further the movement for a State examining board.

Another phase of the social forces of today is seen in the steady substitution of combination for competition. The trusts are here, and I doubt not they have come to stay. Notwithstanding all the hard feelings and hard language which the trusts have excited, the trust is practically invincible, and it is so, for the reason that it is a logic evolution. As soon as men see that competition is likely to end as the play of Hamlet does, "everybody dead," and agree to work together, the trust is evolved. It is impervious to criticism.

How does this affect the medical profession? In several ways. The Marine-Hospital service was the first attack which combination made upon individualism, then came the surgeon to the miner, who soon developed into the medical man to the miner and to his wife and babies, then came the railroad surgeon and other surgeons to the great shops, then the railroad hospital, the sickness and accident insurance company, the lodge physician, and last, but by no means least, the hospitals and dispensaries. Every one of these has been met with the same strenuous outcry with which the small dealer has met the department store. The cry has been justified, but has not prevailed in either case. It is easy to find objections, but it seems impossible to find any successful obstacle to the steady progress of combination. As a part of the great social movement I think we must recognize these facts and adjust ourselves to them.

Indeed, in spite of recognized disadvantages, I think we are compelled to accept the results as, upon the whole, beneficent.

The private practitioner undoubtedly suffers, but that these various devices work well for the entire public can hardly be disputed. In order to put the matter plainly, let us state it thus: "We will abolish the Marine-Hospital, the railroad and contract surgeon, the dispensaries and hospitals, and return to individualistic relations." Put this way, the thing is unthinkable. So we may as well plan for a future for the medical profession in which combination plays a larger and larger part. Any young man contemplating beginning the study of medicine will do well to keep this state of affairs in mind.

Another social force of the day is the economic law of wealth concentration. This is practically only a phase of the action of combination. Economically the impregnable position of the trust is due to the, fact that larger capital makes cheap production possible—it necessarily follows that large capital gathers to itself the lion's share of profit—concentration of wealth must occur.

How does this affect the medical profession? Very seriously. In England, where the concentration of wealth has been going on until it may be said to have reached perfection, the bulk of the population lives not far, either way, from the subsistence wage. The inevitable result is that the great majority of English physicians eke out a precarious existence, not very far from the subsistence wage themselves. It can not be otherwise. In Europe, on the continent, things are even worse. In Russia, so impossible is it for the peasantry to pay a physician enough to recoup him for the outlay necessary to procure a medical education that the thing is not attempted. Large communities live and die without the aid of any physician. In Germany, men who have completed a university education, passed the State examination, and are fully qualified to practice medicine, can be found earning a meager living as couriers, interpreters and hotel waiters. The same economic law is working in this country, although more slowly, as our country is new. When the Cuban war broke out, why was it that the Governor was simply overwhelmed with applicants for appointment as army surgeons? A sure income, and that not a great one, made men eager to go to unhealthy camps and torrid climates. There was no hope of building up a paying practice in Cuba or Florida or Manila, no likelihood of long enjoyment of the sure income, but it was sure while it lasted. One of the New York medical journals said, a couple of years ago, that fully two-thirds of the physicians in New York were living a life of "dignified starvation."

These economic laws have no respect for the individual. There are no better trained medical men in the world than those of Great Britain and Germany, but fine preliminary training makes no difference. We may raise the standard of medical education higher and higher, but if the income of the average man decreases, the income of the average physician must decrease also. The *Iron Age* has recently stated the case in a way to make physicians think. It says: "Prosperity has returned, but it is prosperity based on a permanently lowered rate of wages." If this be so, then the medical profession must adjust itself to a permanently lowered income until the point is reached when the professional career is less attractive than some other. The experience of England and Germany shows that this purely economic law works slowly—that many young men go on and get a college and professional education, of which they can make no use. The disturbing factor is this: success in one of the professions gives a desirable social standing. Ambition nerves men to risk failure for the chance of social elevation. The end is, however, the same—the medical income will be reduced to its lowest terms. This, too, is food for reflection for intending students.

It may be worth while, in passing, to note that when the concentration of wealth is once an accomplished fact, the social position of the physician follows the universal law. He can maintain no social position which his wealth does not give him. There are physicians in England who hold high social position, but the average English physician on starvation income occupies precisely his proper social level. That the social position of the physician, even when he has members of the nobility on his visiting list, is somewhat dubious is shown by a recent controversy in the English medical journals. The question was this: If called to attend one of the servants in the house of a person of title, should the physician enter at the master's door or at the servants'? Think of such a question being discussable! Another was this: Ought the physician, calling upon a distinguished patient, ring the bell or use the knocker? A medical man of experience decided that the use of the knocker would imply an unwarrantable familiarity with his lordship, it were better always to use the plebeian bell-pull. These are odd and amusing things to be seriously discussed in a medical journal, but the fact that they are discussed is not amusing, but gives food for serious thinking. When we think of the future of the medical profession all these things need to be remembered.

Even in our own favored land medical men have been known to do some careful wirepulling. That high ethical ideal which we have carried about from olden times, like the sacred ark, has had some rude shocks. "Business" has forced its way into the profession; medical men send bills, vulgar bills, instead of accepting a fee as of old. We are even so badly tainted with the spirit of the age that we form a "collection agency." Combination for commercial purposes again. It had to come.

Ethics again has been scratched at least, if not broken, by advertising. We have, to be sure, managed to keep the form, but the substance of the ethics of the old days is, we all know, rather tenuous in the matter of soliciting trade. (It pains me to use the word.) The rivalry to secure medical appointments to hospitals, colleges, dispensaries, manufactories, railroads, insurance companies and lodges is not based so much on actual as on advertising value. There is no use disguising the facts. Commercialism is here. We are carried resistlessly by it; the nobler souls who cherish the old traditions struggle in vain; they are defeated or exhausted.

It is not a pleasant thing to look at. I invite you to turn and look forward—it is a more pleasant prospect.

There are many who deplore the results of industrial evolution, many who grow indignant, many who cry out against it, but when you ask the questions: Can we return to the old ways? Can the shoemaker again take the place of the shoe factory? they are dumb. To return is unthinkable, and we must go forward. What is the goal of industrial evolution? One of two things it must be. Either combination of

capital, with its control of wealth production, will lead to complete concentration of wealth, or the people will rise up and say: "Yes, combination of capital, organization of production and distribution are admirable things, but it is disastrous and wrong that a few should reap all the benefits, should possess all, and the multitude live by sufferance. We will all take possession of the combinations; all will share in the benefits of organization." This is socialism.

These are the alternatives. If we go forward to the first we will but follow the track which other dead nations followed. When wealth concentration is complete society rots at both ends; the hopeless poor become vicious, indifferent, cowardly and lazy. The rich rot with licentiousness, become vicious, indifferent, cowardly and lazy also. The other alternative is a new organization in which there will be evolved a wider self-interest than we have yet known. Man has already gone through these stages in the progress. Man loves himself first; the barbarian gets no farther. Man learns to love wife and children, includes them with himself; he has evolved a wider self-interest. Thus primitive races evolved the family. So men have developed wider self-interests in the formation of the tribe, the petty state—one's country. The last step remains to be taken. "Thou shalt love thy neighbor as thyself" is not the expression of an arbitrary law, but the prophecy of the evolution of the race.

Out of competition we have evolved combination; out of commercialism we are steadily developing an organization in which the fundamental rule shall be,

> From each according to his ability,
> To each according to his needs.

Do you say this is visionary? Why it is the glory of our own profession that it has already proven the reality of the motto.

I spoke of noble souls who cling to the old traditions of the ethics of the profession. Let us take courage in this: even in the midst of commercialism the members of our profession, with singular unanimity, have lived by the rule,

> From each according to his ability,
> To each according to his needs.

Where is the physician so base as to keep secret anything which he has learned which will help save or better life? Freely, without price, we give to each according to his needs. Jenner, Sims, Lister, Simpson, McDowell, Senn, Murphy, Osler, Charcot, Virchow—why continue the list? It takes in every honorable man in our profession, the world over. We habitually give whatever we can—each according to his ability. Who have done the marvelous works of preventive medicine? Medical men without number. Every step of preventive medicine has been a testimony to the practicability of an organization based upon the rule: "Thou shalt love thy neighbor as thyself."

The Roman Empire had no public schools. Rome evolved to an absolute plutocracy and so ended. The American people read, they agitate, they have a magnificent self-control—let us hope that they will evolve something better than plutocracy. If they do, the medical profession will take the place which at once appeals to every honorable man in the profession. Preventive medicine, in a socialistic state, will have free play. Much as we have accomplished in spite of individualistic opposition it is safe to say that the field offers fine possibilities. Imagine the possibilities in the way of sanitation and prevention of communicable diseases when the State controls cash capital and administration. In the new state the tendency, now so strongly marked, will increase—I mean the use of hospitals and sanitariums for the well-to-do as well as the poor. We have already reached the point when, in cities, almost all surgical work is done in hospitals rather than in homes. In the future almost all the seriously sick will be cared for in hospitals.

Again, in the coming society, what remains of private practice will be done by fully equipped medical men who will not be annoyed by the miserable necessity of sending out bills, but who can put into their work all the enthusiasm for scientific medicine and all the zeal for doing good which have been the most glorious attributes of our profession in all time.

If socialism is impracticable, then medical men can not rail at it, for we have always been impracticable. If socialism is visionary, it is but the carrying out, by all men, of the principles by which the medical profession, at least, has always lived.

21 State Street.

ORIGINAL ARTICLES.

NURSING AND NURSES IN WAR.

BY N. SENN, M.D., PH.D., LL.D.

Professor of Surgery, Rush Medical College, in affiliation with the University of Chicago; late Lieutenant-Colonel U. S. V., and Chief of the Operating Staff with the Army in the field.

One of the grave problems of modern warfare is the proper care and nursing of the sick and wounded.

Our recent experience during the war with Spain has brought the subject prominently to the attention of the military authorities and the people of the United States. The war just ended has furnished the most instructive and forcible object-lesson, in demonstrating the importance and necessity of making adequate preparation for the proper care and management of the disabled soldiers in war time. The motives which precipitated the war were of the purest, noblest kind, arising from the desire to bring freedom and liberty to the legitimate owners of our neighboring islands, who, under the iron rule of an effete, bankrupt monarchy, had been deprived of their liberty, happiness and prosperity for centuries. On our part, the war spirit was aroused by a sense of duty to our neighbors and to advance the cause of humanity on our own hemisphere, and not for gain nor conquest. It is not strange that our liberty-loving people responded so promptly to the call of the Chief Executive for volunteers. It required no special foresight to predict with certainty that a war with Spain, in Cuba, would result in greater loss of life and suffering from climate and disease than from the Spanish bullets. The result of the war has shown that this expectation has been fully realized.

The short, brilliant campaign on land and sea has taught the outside world the strength of our arms, and resulted in a victory over a foreign foe, which is well calculated to stimulate the pride and patriotism for our government and its various departments and institutions. The war just ended was characterized by the humane treatment of our vanquished enemy, and the desire on the part of the government and the people to provide the invading army with all the necessities and comforts compatible with active war-

fare. The war cloud came upon us so unexpectedly that a certain amount of confusion and unpreparedness in the management of the campaign had to be expected. Considering what has been accomplished, we have every reason to feel grateful that the prize secured was purchased at no greater cost of life and suffering. It was our first experience in fighting a foreign foe in a foreign land, and the many lessons taught and learned will prove of the greatest value should we again be called to cross swords with a nation beyond the limits of our country. Many of the well-founded complaints of the management of the war arose, not from any dereliction of duty of the heads of the different departments, but were due to a faulty organization, and this is particularly true of the medical department, which has been so severely criticised. The executive power of the Surgeon-General is indeed an extremely limited one. Everything of importance has to pass through the hands and by sanction of the Secretary of War. The Secretary of War is a busy man in keeping track of what is going on in his department outside the Surgeon-General's office. Again, the medical department depends entirely on the quartermaster's department in forwarding and distributing medical and hospital supplies. No wonder that many collisions between these departments occurred during the war with Spain. Our experience has taught us in a most forcible way that the medical department should have charge of everything pertaining to the care of the sick and wounded, in order to accomplish that for which it is intended. The Surgeon-General should be given higher rank and be clothed with more executive power, to enable him to discharge his duties with credit to himself and greater benefit to those who are now only nominally under his charge. The Secretary of War is not supposed to possess much knowledge of sanitation, medicine and surgery, or other wants of the sick and wounded, and yet the Surgeon-General is powerless in the execution of his orders without his co-operation. If the forwarding and distribution of the medical and hospital supplies were directly under the control and management of the medical department we would have heard less of criticism regarding the scarcity of medicines and hospital supplies. To make a department strong and efficient it must be independent, and invested with the necessary power it is expected to wield, and charged with a corresponding weight of responsibility.

The proper care of the sick and wounded in war is a subject as old as warfare itself. It is a subject that has attracted the liveliest interest of the most famous and successful commanders, and that has taxed severely the ingenuity and mental resources of the most famous military physicians. The soldier who risks his life in the defense of the honor of his country, when disabled from duty by wounds or disease, is entitled to the most humane treatment and the best of care on the part of those in whose charge he is placed. The moment he is disabled from performing his duty he comes under the care of the medical department, subject to its rules and regulations. The transportation and proper care of the sick and wounded are under the management of the medical department. The immensity of the labor which devolved upon the Surgeon-General and his limited staff of assistants during the war just ended must become apparent to the general public, when we consider the enormous number of the sick in an army of 300,000 men distributed from Porto Rico to Manila—nearly one-half the circumference of the globe. Hundreds of the recently enlisted men had to be detailed for hospital duty and were placed in charge of the sick. No wonder that among so many some proved absolutely useless in performing the trying duties of an army nurse. Nursing in the army in times of war is an occupation which is always attended by many difficulties, and particularly when the seat of war is in a foreign country. The unrest incident to the mobilization of troops, the moving and erection of hospital tents, the limited facilities for cooking and often for working, the occasional overcrowding of the allotted hospital space, the uncertainty of supplies, are some of the inconveniences which the army nurse must expect to meet and correct as far as lies in his power to do so. Patience, obedience, perseverance and devotion to duty are a few of the most essential virtues conducive to satisfactory and successful nursing in war. The army nurse, from the very beginning of his philanthropic career, places himself beyond the reach of any glory and distinction to be gained on the battlefield. His duties are more arduous and taxing than those of his comrades of the line. Being constantly in contact with infectious diseases he exposes himself to more danger than on the battlefield. It requires more courage to serve in a yellow fever or typhoid fever hospital than to face the enemy on the battlefield. The army nurse, with his inadequate pay and no rank, has little else to expect but a full measure of ingratitude. His greatest devotion and best efforts are never fully realized and appreciated. If he is competent and devoted to his work, his greatest satisfaction must consist in the consciousness of duty well performed. He is a Samaritan in every sense of the word, whose sole object is to serve his disabled combatant comrades. Few men are born with intrinsic qualities which constitute an efficient successful nurse. A true nurse is born, not made. Most male nurses lack the gentleness of manner and touch which exercise such a soothing influence over the fretful, nervous, impatient patient. The male army nurse should know something about cooking to enable him to prepare some special palatable dishes for the sick—an accomplishment which but few can claim. To utilize the ordinary army rations for this purpose requires tact and skill. It is wonderful what can be made out of bacon, beans, canned meat, hard tack, salt, spices and water in the hands of one skilled in the preparation of special diet. It is in this department of nursing that women excel men beyond comparison.

It must be conceded on all sides that the nursing in the field during the last war, as well as during any of the preceding wars, done almost exclusively by male nurses, leaves much to be desired. Many of the men enlisted for this special purpose, others detailed from the line for the hospital corps, lacked entirely the necessary qualifications by nature and training for such an important and responsible position. The haste with which the war was planned and finished precluded the possibility of making a careful selection. The tact to make patients comfortable under the most adverse circumstances is rarely found in men. To anticipate the wishes and carry out the directions of the attending physicians, requires more knowledge and training than belonged to the average hospital-corps men. The hospital-corps men of the volunteer forces, mostly new men in the service, did the best they could under the circumstances, but their work showed a decided lack of discipline and special train-

ing at a time when their services were most needed. With additional experience many of them would come up in a comparatively short time to the standard of requirements. An earnest willingness to learn and improve must be accorded to most of them. It takes months of hard work to make a soldier; it takes a much longer time to make a good nurse. The members of the hospital corps of the regular army are selected with great care, and are required to undergo a thorough and systematic course of instruction, hence they had an advantage over their comrades of the volunteer forces, and acquitted themselves more satisfactorily in the discharge of their duties. But every medical officer is conscious of the fact that even many displayed shortcomings which were too conspicuous to be easily overlooked. The average male nurse, in private, as well as in military life, works for money, and not for the dignity and good standing of his profession, or the welfare of his fellowmen.

The sunny side of the hospital-corps service was to be found in the transportation of the sick and wounded. No fighting army in the world ever enjoyed better ambulance facilities. No army is supplied more liberally and with better litters and ambulances than were in use during the recent war by our troops at home and abroad, and no better or more efficient men could be found anywhere than those who were placed in charge of the transfer of our sick and wounded. The manner in which our sick were conveyed from ambulance to hospital and from hospital to ambulance, commanded the attention and elicited the highest praise from our foreign visitors. After my return from Porto Rico, on my way from New York to Montauk, I was joined by Lieutenant Commander Tomatsuri of the Japanese naval medical service and two staff surgeons of the German army, who, upon arrival at the camp, watched with the greatest interest this part of the work of the hospital corps. One of the German surgeons freely admitted that our hospital corps men were far more efficient in this part of their work than those of the German army, and, what commended their work to him the most was the gentleness with which the patients were handled. He was astonished that a hundred or more patients could be transferred without hearing a rough or angry word, which he assured me was rather the exception than the rule in the German army. Hospital construction as witnessed by these distinguished foreign observers of our war, during the early history of Camp Wikoff, was another source of surprise and admiration to them. It was difficult for them to comprehend that in less than three weeks excellent hospital accommodations were furnished for nearly two thousand patients. I doubt if any of the old countries, always in a state of armed neutrality, could repeat what was accomplished by our medical department in this direction. Our foreign observers will never forget the impressions received in Camp Wikoff, with special reference to the transportation, care and treatment of the sick of our returning army from Cuba. Such object-lessons are best calculated to impress foreigners with the magnitude and resources of our country and the patriotism of our people.

A new phase in nursing was initiated during the last war by the use of hospital ships. The medical department of the Army and Navy recognized at the proper time the necessity of employing ships adapted for the transportation of disabled soldiers from the seat of war back to their own country, where they could receive better care and nursing and escape a prolonged stay in a malarial, semi-tropic country. The hospital ships *Relief*, *Solace* and *Missouri* were the means of saving hundreds of lives which, without such means of transportation, would have perished in Cuba and Porto Rico. The horrors enacted on some of the transports are more than balanced by the comforts, and even luxuries the sick and wounded enjoyed on these floating hospitals on their homeward journey. Nothing has done more in saving life and alleviating suffering than these messengers of mercy on their hasty errands to and from the seat of war. It was on these vessels that the nation's patients were in the care of competent female nurses. Ask any of the sick soldiers who returned on any of these ships, and you will find him ready to praise and bless the female nurse under whose care he was placed on his return from the seat of war. He will always remember with gratitude her gentleness and devotion to the sick under her care. During the four trips I made on the hospital ship *Relief*, to and from Cuba and Porto Rico, I had ample opportunity to compare the work of the male and female nurses, and I have no hesitation in speaking in decided terms in favor of the latter. Nursing is woman's special sphere. It is her natural calling. She is born a nurse. She is endowed with all the qualifications, mentally and physically, to take care of the sick. Her sweet smile and gentle touch are often of more benefit to the patient than the medicine she administers. The dainty dishes she is capable of preparing, as a rule, accomplish more in the successful treatment of disease than drugs. Her sense of duty and devotion to those placed under her care are seldom equaled by men. The sick soldier, far away from home, relatives and friends, realizes keenly the superiority of female over male nurses, and especially so, if his illness is tinged, as is often the case, with homesickness. It is under such circumstances that the professional female nurse is greeted in camp, on board ship and in the hospital as an angel of mercy, and every look and move she makes are of the keenest interest to the expectant sick. For the time being she takes the place of the deserted wife, the loving mother or the dear sister at the bedside. She watches the progress of the disease by day and by night, and her heart rises and gladdens with the approach of symptoms denoting improvement; deep sorrow and tender sympathy take possession of her when, in spite of all her exertions, the shadows of death advance. Woman is the natural nurse, and nowhere does she appear grander or nobler than when she is ministering to the sick and dying of an army in active warfare. The American woman, above those of any other nation, is peculiarly well fitted for such a post of duty. She is enthusiastic, energetic, tireless, devoted, and, more than all this, intensely patriotic. Our sick and convalescent soldiers owe a lasting debt of gratitude to the small army of female nurses who left their homes with no expectations of pecuniary gain and served their country in camp and field, in fever-stricken districts, and in common with them, suffered the privations incident to an active campaign without a word of complaint.

The demand for trained nurses during the war with Spain came suddenly and rather unexpectedly, owing to the prevalence of typhoid fever in the National camps and later by the return of the sick and wounded from Cuba and Porto Rico. From the very beginning

of the war the Surgeon-General's office was overflooded by applications for service in the hospitals from all parts of the country. The material to select from was enormous, but the task of making a careful selection proved to be a difficult one. The Surgeon-General was overburdened with the various details of his important office and soon found it impossible to attend to this part of his duties in person or through his assistants. In his desire to supply the sick with competent nurses he assigned this duty to Dr. Anita McGee of Washington, who was commissioned acting assistant-surgeon, probably the first time this honor was conferred upon a woman in this country. The services of Dr. McGee proved of the greatest value in selecting from the thousands of applicants a sufficient number of trained, competent female nurses for duty in the hospitals at different points. The American Red Cross Society did excellent work, not only in furnishing supplies of all kinds where and when they were most needed, but also in supplying nurses when emergencies arose. Miss Clara Barton, the Florence Nightingale of this country, president of the society, has performed her onerous duties during the entire war with a devotion and earnestness that merit recognition at home and abroad. She has been tireless in her efforts to bring comfort to the soldiers at times when her service were most urgently in demand. The *State of Texas* and the little steamer *Red Cross*, under her command, made their appearance at Siboney at a time when outside help was most required. Ice, medicines, dressing and hospital supplies were freely distributed among the sick and wounded. Miss Barton and Mrs. Porter, wife of the secretary of the President, went to the front, a distance of eight miles, over one of the roughest roads imaginable, in an army wagon, and extended the work of the Red Cross to the very trenches before Santiago. A female nurse and a number of male helpers ministered to the sick in the Division Hospital in charge of Major Wood. I found representatives of the Red Cross in El Caney, in the vestry of the old village church, dealing out hardtack and flour to the hungry crowds of refugees. After the surrender of Santiago the *State of Texas* was the first vessel to enter its harbor on its errand of mercy in bringing food for the hungry Cubans, and medicines and delicacies for the sick of the victorious and vanquished armies. The Red Cross Society established supply depots in all of the large camps, and the good work done everywhere will live in the memories of all who were engaged in the conflict. I was told by a representative of this society that in Montauk alone for a number of weeks, supplies to the amount of $2000 were distributed daily. The Red Cross female nurses at Siboney did heroic work when the sick and wounded of our army were in the greatest distress. Several of these nurses were among the first of the yellow fever victims, and had to be taken to the first hospital for treatment. The sick and wounded Spanish prisoners at Siboney were almost exclusively cared for by the Red Cross.

Miss Barton has the confidence of the American people, and she has sustained it through the present war by the thoughtful and timely distribution of the innumerable and liberal donations to the society she so well represents. After peace was declared, Miss Clara Barton immediately sailed for Havana to bring much-needed aid to the starving reconcentrados of the long-besieged city, while her numerous helpers continued their faithful work in the home camps. The work of the Red Cross received the moral and substantial support of the charitably disposed citizens throughout the United States, and liberal donations from abroad. Recent experience has again demonstrated that this society is the most important auxiliary in war as well as other National disasters in bringing prompt relief to the sufferers. It seems to me that the Red Cross Society is the proper organization from which to recruit the nursing force should we be confronted by another war. This society should be made stronger and extend its influence to every part of the country. Under the supervision of its representatives, educated, trained nurses should receive additional training preparing them for military service and other emergency work. A list of names of nurses who had satisfied the proper authorities of their special proficiency for this kind of work should be kept, and the selection made from it, should a request be made by the medical department for service in the army. Provision for competent male nurses for army duty should be made by a more thorough training of the hospital corps of the National Guard of the States, a much neglected subject west of the Alleghany mountains. In addition to this, it would be advisable to establish training schools for young men in the principal cities of the United States, on the same plan and for the same purpose as the Samaritan organizations in Germany. The training of such men should be of the most practical nature, including the transportation of the sick and wounded, first-aid dressing, the art of nursing and cooking, with special reference to diet for the sick. An education of this kind would be of the greatest value and profit to the pupils as well as the respective communities, and would be the means of furnishing desirable material for the hospital corps in case of war and efficient aid in case of accidents and National catastrophies necessitating a sudden call for competent nurses. It appears to me that such a school of instruction for Samaritans could be made attractive and interesting to the pupils, and would become a reliable source from which to make selections for army nurses and the hospital corps.

The Sisters of Charity stood in the front rank of volunteer nurses in the Spanish war as well as in nearly all of the great wars during the last two hundred years. It is the oldest and best working order in the Catholic church. President McKinley became familiar with their efficient and faithful services during the Civil War and gladly accepted the offer of the Order to furnish nurses, made soon after the war broke out. All of the principal hospitals in charge of the Sisters of Charity sent representatives to the front. They were on duty in nearly all of the National camps in Cuba and Porto Rico. The first six sisters were sent to the Naval Hospital, Portsmouth, Va., July 16. The whole number of sisters on duty September 24 was 232. The annex and the surgical wards and operating tent at Montauk were exclusively in charge of 100 members of the order. Their work in that great camp was a source of gratification to and admiration by the medical officers and all of the visitors and relatives of the sick. Several of these brave sisters have gone to their final reward in the service of their country, others are lying dangerously ill in the different hospitals. Too much can not be said in praise of this noble order, as it has always made itself felt in a modest but most efficient way in all of the great wars, without regard to nationality or creed of the contending armies.

Among the distinguished lay nurses special mention must be made of Miss Chanler of New York. I met Miss Chanler in Ponce, Porto Rico, where she did most excellent service in the military hospitals. Her numerous patients will always remember with deepest gratitude her arduous, unselfish work. The Misses Wheeler, daughters of Major-General Wheeler, accompanied their heroic father to Cuba, nursed him when he was ill and labored earnestly among the sick of his command. They continued their labor of love at Camp Wikoff, where many a sick soldier owed his restoration to health to their unremitting, tender care. Diet kitchens were established at Camp Wikoff under the supervision of Mrs. M. H. Willard of New York, which proved of the greatest benefit for the sick and convalescent soldiers. I take the liberty to quote from a letter recently received from Mrs. Willard, dealing with this subject: "For six weeks I was at Montauk, representing the Red Cross Society Maintenance of Trained Nurses, which, together with the Massachusetts Volunteer Aid Association, established diet kitchens in connection with the General and Division Hospitals. On my arrival at Camp Wikoff I found the kitchen department in a very serious condition. The officers, doctors, nurses, orderlies and employees, as well as the patients, were procuring their food from a small wooden building, presided over by an army cook, and everything in and around the mess hall was in a dirty condition. Rice and oatmeal were the principal diet for the sick, and this was so often burned and badly cooked that the patients were unable to relish or retain it. The first diet kitchen was established August 27, and those at the three Division Hospitals soon followed, and this, with one at the Detention Hospital, made a system of five kitchens, covering a radius of three miles, with a force of fifteen cooks, several dieticians, ten volunteers and twelve detailed men. These kitchens supplied carefully and scientifically prepared food for the sick and convalescent, and the physicians and nurses were able to procure for their patients, not only liquid diets, but light and special diets as well. One of our prominent physicians remarked that his patients were better fed at Camp Wikoff than in any hospital in New York City with which he had been connected. The Government soon realized the value of the work, and two weeks after the opening of the kitchens they were turned over to the officials, and from that time, with no cost to private enterprise, the sick soldiers of all the hospitals were served, not only with home-made broths of beef, mutton and chicken, but also with oysters, broiled chicken, tenderloin steaks, chops, jellies, custards, etc."

This new enterprise in caring for sick soldiers deserves to be brought to the attention of the general public and should receive the strongest encouragement in the event of another war.

The different relief societies, National, State and local, did noble work in aiding the Government in properly caring for the sick and wounded. The names of Miss Helen Gould, Mrs. Ellen Hardin Walworth, and scores of other noble-minded, patriotic women will always be prominently mentioned in the history of the short, decisive war so gloriously ended. The charity that has been practiced so bountifully and so generally, must satisfy our victorious army that the patriotism they carried into the field has been cultivated at home in words and action to a degree and extent unparalleled in the history of the world. War in a just cause begets patriotism, and nothing can demonstrate this more clearly and forcibly than our experience in the field and at home during the last eventful six months.

IMPLANTATION OF URETERS IN RECTUM.

A METHOD HAVING FOR ITS OBJECT THE MAKING OF SUBSEQUENT INFECTION OF THE URETERS AND KIDNEYS IMPOSSIBLE.

BY FRANKLIN H. MARTIN, M.D.

CHICAGO.

For two years I have been experimenting on dogs with the object of determining whether the complete removal of the bladder can be made a justifiable operation. In order to make removal of the bladder an acceptable procedure it is necessary to dispose of the ureters in a manner so that the substitute receptacle for the urine will have reservoir room, contractile power under the control of the individual, and, most important, a perfect sphincter outlet, also under the complete control of the individual. Reserving the history of the work already done in this comparatively new field for a subsequent paper which I now have in preparation, which also will give my many experiments in detail, I will simply state that the rectum seems to offer a reservoir which fulfills the above indications.

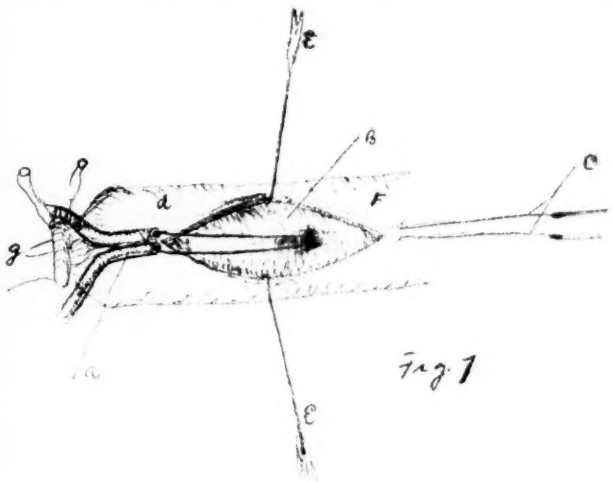


FIGURE 1.

The reason why the lower bowel does not make an ideal bladder is because it is not clean, and almost all experiments in which the ureters have been implanted in the rectum in dogs have ended—when they have survived the ordeal of the primary effects of the operation—in infection of the kidneys and death from nephritis.

Several ingenious methods have been offered by experimenters, the most of which I have undertaken on animals. The procedure which I now offer is unique and simple of accomplishment. When I say simple I am speaking in comparative terms. Ureteral-rectal anastomosis is a very delicate and difficult operation under any circumstances.

The principles of my operation are as follows: 1. The ureters empty into the bowel in the direction of its long diameter, and from above downward, so that the urine is discharged in the direction taken by the fecal current. 2. The ureters are buried in the walls of the rectum for a distance of an inch or more longitudinally, so that in the act of defecation the fecal

mass will squeeze the caliber of the ureters closed by its pressure on the mucous membrane, and that pressure is exerted from above downward in the direction of the onward flow of the urine, thereby emptying the ureter by a milking process. 3. The ureters are further protected by the muscular coat of the intestine. This is accomplished by surrounding them in their longitudinal course through the intestine to the extent of two centimeters by the circular coat of the bowel. This muscular coat of the bowel, in acting

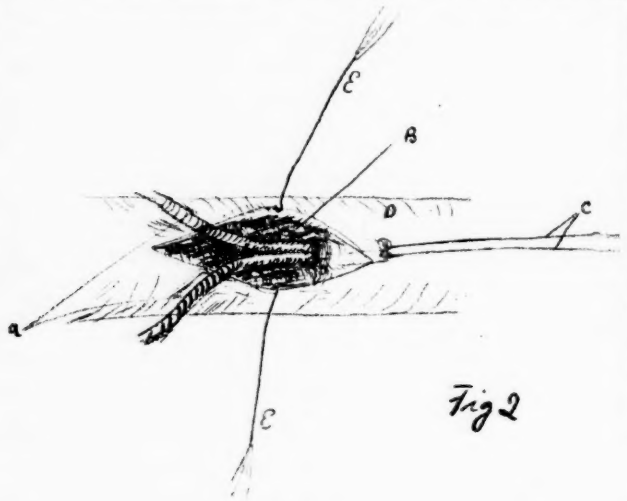


FIGURE 2.

from above downward, milks the urine downward and holds the ureters closed when the rectum is aiding in defecation. When the contraction and closure due to defecation is over, the urine will spurt forth with considerable force, acting as its own cleanser. 4. The ureters are implanted in the lower bowel, which is normally empty except at defecation.

OPERATION.

1. Place patient in Trendelenberg position; make

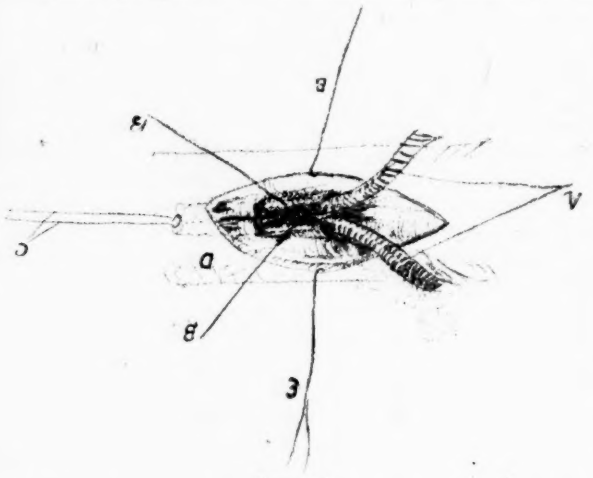


FIGURE 3.

the abdominal incision so as to expose the rectum; pack back the omentum and intestines; make a longitudinal incision of the peritoneum over the ureters down to their insertion into the bladder, and dissect them out with the finger to a height of about three inches; tie each ureter near the bladder with strong silk and sever them above that point. 2. Bring each ureter forward and approximate in front of the rectum by including the wall of each in one fine silk suture armed at each end with cambric needles (Fig. 1C); approximate the ureters further by two fine silk sutures passing through the outer walls of the ureters only, securing the two tubes parallel, as shown in Fig. 1. Place severed ends of the ureters on a gauze sponge while executing the next step. 3. Make a longitudinal incision two inches long through the peritoneal and subperitoneal tissue of the upper wall of the bowel, and dissect back this tissue so that an oval surface of the muscular coats of the intestine is exposed, the length of the primary incision in the bowel and one inch wide at its center. The flaps are held apart by silk stays, tenacula or small retractors. 4. After making sure that the bowel is free of fecal matter and having secured it above by a clamp or rubber tubing, make a small incision through the remaining coats of the bowel about large enough to admit the two ureters without pressure and about one-third the distance from the lower end of the oval denudation; pass through this opening into the interior of the bowel the double threaded suture previously placed in the ends of the two ureters and bring the needles out a short distance apart, slightly below the lower end of the denudation, about one inch from the opening made for the ureter (Fig. 1C), and draw the ureter through the opening and to the point at which the stay silks found their exit (Fig. 2C). 5. Eleva-

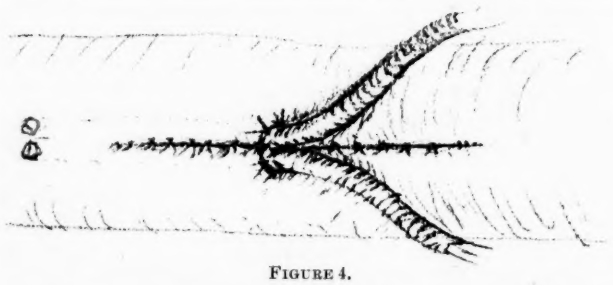


FIGURE 4.

ting the two ureters at right angles to the bowel, they should be secured to the fibrous and mucous coat of the bowel by a number of closely-applied sutures of fine catgut or silk, great care being necessary not to penetrate to the mucous coat of the ureter or to apply the sutures so as to constrict the ureters. The ureters are now laid parallel with the bowel on the denuded portion, the handling silk is made taut and additional sutures passed, securing the ureters to the muscular coat of the intestine as it is rolled in by the tension on their ends. 6. The ureters are now buried in the muscular coats of the bowel by folding those coats over them for a distance of one inch (Fig. 3B.B.) and securing them to the ureters by fine silk sutures. 7. The peritoneal coat of the bowel is now closed over the ureters to the point where they separate and then below them above that point. This is accomplished by a running inversion stitch of silk. A few additional interrupted sutures of silk attach the peritoneal coat to the outer coat of the ureters (Fig. 4). 8. Close the abdomen with a small gauze drain, passing down to the bowel in the lower angle of the wound.

REMARKS.

This method is the outcome of experiments on thirty-seven dogs and three operative procedures on human beings. Of the latter there was one removal of the bladder which lived three years, and one more of exstrophy of bladder in which the ureters were implanted in the rectum with only partial success. Of the experiments on the dogs four lived for indefinite

periods, two with both ureters in the rectum. These experiments in detail will form a subject for a further communication.

SCHOTT TREATMENT OF CHRONIC HEART DISEASE.

WITH REPORT OF CASES.

Read before the Medical Society of the City Hospital Alumni, of St. Louis, Nov. 3, 1898.

BY ELSWORTH SMITH, JR., A.M., M.D.

INSTRUCTOR IN PHYSICAL DIAGNOSIS, AND PHYSICIAN MEDICAL CLINIC, ST. LOUIS MEDICAL COLLEGE, MEDICAL DEPARTMENT OF WASHINGTON UNIVERSITY; CONSULTING PHYSICIAN, ST. LOUIS CITY HOSPITAL.

ST. LOUIS, MO.

By way of preface, I should like to recall certain fundamental principles in the management of diseases of the heart upon which rests the rationale of this method of treatment by baths and gymnastic movements. At the outset it is important for us to distinctly remember of how slight importance, from a prognostic standpoint, is a valve lesion, as evidenced by a murmur and the other physical signs, for the discovery of such a lesion does not in itself consign the victim to a certain or early grave any more than it does per se call for the administration of the class of remedies known as cardiac stimulants. Indeed, many persons with marked physical evidence of valvular defects live out actively and usefully their allotted life expectancies, uninfluenced apparently by these cardiac maladies. Lauder Brunton relates that when he was a student of medicine, one of his professors was the subject of adherent pericardium, and consequent dyspnea, but is now quite strong and well after thirty-five years of professional work. Balfour states that many cases of aortic regurgitation run along comfortably and perfectly free of symptoms for thirty or forty years, and one of his friends, the subject of mitral regurgitation from the age of 30 years, led an active and useful life up to his death, at the age of 70 years; but these are but two of innumerable such examples which go to prove that the destiny of a case of valvular disease of the heart does not depend upon the valve lesion itself, so that we must look elsewhere for the pernicious results that do often occur in these cases; and in so doing we discover that it is the condition of the heart muscle which determines the future course of these cases. So long as the cardiac muscle remains sufficiently strong to carry on the circulation in spite of valve defects, just so long will the patient be perfectly comfortable and entirely free of symptoms, he having then, as we say, a compensated heart lesion; but allow this muscle to grow weak from any cause, to become, for example, the seat of fatty degeneration, then it will soon find itself unable to propel the proper amount of blood beyond the obstruction into the arterial system; resulting in damming up of the vital fluid in the venous trunks, and giving rise sooner or later to the picture of an uncompensated heart lesion, with which we are all so familiar.

We may, therefore, say the treatment of chronic heart disease practically resolves itself into the proper development and care of a muscle; and how does the athlete acquire his powerful muscles? Simply by a process of training, with the object, through a nutritious diet, of supplying his entire system, muscles included, with a sufficient quantity of rich, arterial blood, so that by systematic, regulated exercise he may cause his muscles to enlarge or hypertrophy, and thereby gradually become capable of doing more and more work. Perfectly analogous to this should be the care of the heart muscle, called upon through disease to do extra work; and in reality this is just what, and only what, the subject of beginning cardiac disease needs. He must be enabled through attention to rules of hygiene, proper diet, etc., to supply his heart with an abundance of good, rich blood, and through properly regulated exercise, he must gradually accustom his heart muscle to meet the increasing demands on its force and strength. This is the only medication such a case should receive during the formative stage of compensation, and even afterward, in maintaining this condition of compensation in a comparatively healthy heart muscle. We should be no more justified in giving heart stimulants or tonics to such a case than we would be in beating the animal which is faithfully drawing along a heavily laden wagon; for in either case we would be doing more harm than good.

A striking example of the capabilities of muscular power through training is the classic one of the wrestler of Milo, who, it is said, was able to carry about a bull by beginning to carry him as a calf, and continuing to do so daily from that time until grown. On the other hand, in one devoid of gymnastic training, a sudden great effort beyond what has been his custom, may cause distress and dyspnea; so we see the strength of the cardiac and other muscles is, in fact, largely relative, and stands in relation to the work ordinarily demanded of them. The heart muscle also resembles those of the athlete in that they all require a definite amount of rest to prevent their becoming fatigued. This all-important fact is very graphically put by Brunton as follows: "To walk one thousand miles in six weeks can hardly be called any feat at all; but to walk one thousand miles in a thousand hours is a very different proposition, and may be regarded even now as beyond the capacity of most men. There is no more actual work involved in walking twenty-four miles in one day than in walking twenty-four successive hours, one mile for every hour, the difference between the two being the short period allowed for rest and recuperation between each period of exertion in the latter. Now, the action of the heart is like that of the athlete who has very short periods of rest between his periods of action, and just as the athlete's work is rendered more difficult by shortening his period of rest, so is that of the heart by increasing the rapidity of its pulsation."

In order, however, to thoroughly appreciate this very apt comparison of Brunton, we should recall for a moment how the heart obtains its rest. The cycle of its action is, as you know, divided into systole, diastole and pause, and it is during the two latter periods that the ventricles, the most important muscles of the heart, secure their much-needed rest. Should the action of the organ be accelerated, what is the result? Why, the time occupied by the systole remains as great as ever, while that of the diastole and pause is shortened, so that abnormal rapidity of the heart always means that the organ is doing more work with less rest—a condition in which we nearly always find it in disease.

This résumé of fundamental principles would, however, be incomplete without a few words concerning the manner in which the muscles of the heart are nourished, without recalling, for example, that the nourishing fluid is carried to them through the two

coronary arteries. Now the blood probably enters these channels most freely during the diastole and pause because of the obstruction during the systole offered by the contraction of the ventricular walls, and the consequent compression of the lumen of these vessels and their branches, which, while it may favor the distribution of the blood already within them, must, nevertheless, offer a serious impediment to the inflow of a fresh supply from the aorta. How much more rational it would appear to suppose that these coronary vessels receive their greatest influx of blood during the diastole, for then, through the relaxation of the ventricular muscles, their lumen would be entirely patent. Certainly, the tension in the aorta, which is then high enough to, as a rule, close the aortic flaps with force, would naturally then be sufficiently high to overcome the pressure in the coronary artery. It would seem natural, therefore, to conclude that the quantity of blood going to the ventricular muscles would be largely measured by the length of the diastole and pause, and as we have seen that the time occupied by these two periods is always less in an abnormally rapid heart, it follows, as a matter of course, that the quantity of nourishment must also be greatly curtailed in the muscles of such a heart. The pneumogastric nerve, therefore, at once becomes perhaps the greatest factor in the control of the nutrition of the heart muscle, for it is the cardio-inhibitory nerve of the organ, keeping down the rate of its action, so as to insure it the rest and nutrition which result from a full and complete diastole and pause, while it, at the same time, exerts moreover certain specific trophic influences over its muscular fiber; and it is, in fact, to the power possessed in varying degrees by certain remedies of stimulating this nerve that these remedies mainly owe their titles of heart tonics and stimulants; such, for example, as digitalis, which ranks certainly first, followed by strophanthus, convallaria, adonis vernalis, and several others—nux vomica being an exception in that it exerts its influence mainly on the cardiac ganglia themselves—and also nitroglycerin, whose most important action is that of a vasomotor dilator, whereby peripheral resistance is reduced, and the work ahead of the weak heart thus made easier.

With the foregoing facts in mind, we may now proceed to consider briefly the treatment of chronic heart disease. Cases in which compensation is in the formative stage, and those in which it is fully established, have already been alluded to. Those in which compensation is failing require, in addition to hygienic care and carefully regulated exercise, the administration of some of the well-known cardiac tonics with due regard to the needs and indications in each case. Where the failure of compensation is complete, so that the least effort leads to great distress, complete rest in the recumbent position must be insisted upon, and the exercise required for healthy general nutrition supplied in a passive manner by massage. In this way alone, the pulse-rate may be reduced from five to ten pulsations per minute, which even in five minutes would mean the sparing of a laboring heart many beats; so that absolute and complete rest in the recumbent posture can not be too strongly insisted upon in such cases to permit the flagging and almost worn-out organ to somewhat regain its strength, to be followed later on by carefully graduated exercise. But there comes a time in the history of these cases where the above plans of treatment fail to restore compensation, where the general anasarca, dyspnea, and the resulting great distress steadily increase, in spite of every effort on the part of the physician, and when dissolution seems to be inevitable. Fortunately, however, even at this critical juncture, we still possess one more remedy that may save life in a certain proportion of these most unpromising cases; and this remedy is the system of medicated baths and resistant movements, which have been so extensively developed and successfully applied by the brothers August and Theodore Schott at Nauheim, Germany, a small town in the Duchy of Hess, near Frankfort and Hamburg.

The credit, however, of the discovery of this method should not be given to them, but rather to Beneke, who first discovered it as far back as 1859. Though from 1870 to 1890, the Schott brothers were frequent contributors in the German press, and the springs were, during all this time, being visited by thousands of sufferers, it was not until 1894 that England gave the subject any serious thought, when presented in the *Lancet* by W. Bezley Thorne; since which time the method has there become very popular. Babcock of Chicago and Heineman of New York were the first to apply the method in this country, and were followed later on by some few others. In November, 1896, at the suggestion of Dr. William Osler of Baltimore, his first assistant, Dr. C. M. B. Camac, visited Nauheim to study thoroughly the treatment as carried on there, and his comprehensive report appeared soon after in the *Johns Hopkins Hospital Bulletin*. So that you see the treatment is not new, but an old method which appears new because so long neglected.

According to Schott, these natural springs at Nauheim contain, among other ingredients, sodii chloridi 2 to 3 per cent., calcii chloridi 2 to 3 to the thousand, various salts of iron, and very large amounts of carbonic acid gas. These mentioned ingredients are the active agents in the bath, and their action is a reflex one. The carbonic acid gas entering directly into the skin, and the salts by imbibition, they all exert an influence on the cutaneous nerve-endings, which is carried to the nerve centers and results, first, in stimulation of the pneumogastric nerve with a resulting tonic influence on the heart and slowing of its rate of action; and, secondly, there is produced by these chemic ingredients also a reflex excitation of these terminal nerves in the skin, which results in a vasomotor dilatation of the arteries of the skin and muscles; and as the skin and muscles are capable of containing as much blood as all the internal organs combined, we have thus a relief of internal congestions, and also a relief of blood tension ahead of a crippled heart. As a result of these influences on the circulation, we have, in favorable cases, besides an amelioration of all the symptoms, an actual reduction in the size of the dilated heart, as is evidenced by a carrying inward of an outwardly displaced apex, and a reduction in the area of cardiac dullness on percussion.

These baths can be prepared artificially according to the ensuing formulæ, and are generally employed in the following six strengths:

Bath No. 1. Sodii Chloridi 4 lbs., Cal. Chloridi 6 oz.
Bath No. 2. Sodii Chloridi 5 lbs., Cal. Chloridi 8 oz.
Bath No. 3. Sodii Chloridi 6 lbs., Cal. Chloridi 10 oz. Sodii bicarb. 6 oz., HCl. 7 oz.
Bath No. 4. Sodii Chloridi 7 lbs., Cal. Chloridi 10 oz. Sodii bicarb. 8 oz,, HCl. 12 oz.

Bath No. 5. Sodii Chloridi 9 lbs., Cal. Chloridi 11 oz. Sodii bicarb. 1 lb., HCl. 1 lb.

Bath No. 6. Sodii Chloridi, 11 lbs., Cal. Chloridi 12 oz. Soda bicarb. 1 lb., HCl. 2 lbs.

To the foregoing different strengths of these ingredients are added forty gallons of water. The bath is to be given every other day, preferably in the morning, when the stomach is most apt not to be full.

Strength No. 1 is given as long as there is any improvement. Should the case come to a stand-still, begin to lose ground, or if after three or four baths of No. 1 strength, there should be no improvement, then the next strength should be tried, and so on up to the third and fourth strengths. The last two strengths, however, are rarely used. The temperature of the first bath should be about 96 degrees F., decreased every third bath from one to three degrees, down to 82 degrees. The patient remains in the first bath five minutes, increasing two minutes every second or third bath until twenty or thirty minutes is reached.

If, during the course of the treatment, the patient should grow steadily worse, or if after fifty baths, there should be no improvement, the treatment should be stopped. The patient should be carefully watched during the entire bath, and upon the appearance of any great increase of dyspnea, or cyanosis, should be removed from the tub immediately, well rubbed and given some diffusible stimulant. A cup of hot milk, cocoa or bouillon should be administered before and after the bath. After the bath, the patient should be put to bed for an hour or two of rest. Ordinarily the effect of the bath is most grateful. Respiration and pulse both improve, and after leaving the tub the patient generally feels inclined to sleep. On alternate days the resistant movements, as introduced first by Schott, are administered. They are nineteen in number, and involve all the larger muscles of the body. They consist of slow movements executed by the patient and gently resisted by the operator. The movements are divided into different groups, as for arms, legs, trunk, hands, feet, etc. At first, only a few of these movements are given, which are to be afterward carefully increased according to the patient's ability to stand them. The object of these exercises is: 1, they train the heart muscles; 2, they cause more blood to pass through the muscular arteries, and thereby help the circulation of blood away from the heart; 3, through the valves in the veins, they favor the venous current toward the heart; 4, they improve general nutrition. In their administration, however, they must never cause any undue fatigue. They rest somewhat on the same principles as Oertel's system of mountain climbing.

As to the class of cases in which the baths and exercises are indicated, the reply would seem to be: in every case where there is failure of cardiac compensation, whether the result of valvular diseases, lesions of the kidney, or those affections primarily of the myocardium. They seem to accomplish most in cases of mitral regurgitation; less in aortic cases, and in the hearts of renal lesions. However, I believe the last class of maladies present a good field for the method in selected cases.

Statistics of results of this method of treatment seem as yet somewhat meager and difficult of attainment, in this country at least. On June 24, 1893, Dr. Robert H. Babcock of Chicago, a well-known authority on diseases of the heart, placed himself under Schott's care at Nauheim for disturbance of compensation, the result of a mitral stenotic lesion. In the report of his own case, published in the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, November 11, 1893, he says that at the time he consulted Schott he was suffering with dyspnea on exertion, some cyanosis, a feeble pulse, but no edema. Schott diagnosed a mitral stenotic lesion. He received baths and movements from June 24 to July 29, 1893, and returned home free of symptoms, and in his own words, in excellent health. Camac has reported ten cases from the wards of Johns Hopkins Hospital in the June number, 1897, of this Hospital's *Bulletin* as follows:

Name.	Diagnosis.	Treatment.	Condition during treatment.	Result.
A. H., colored..	Aortic Insufficiency.	Baths only.	Improved.	Death.
Mr. C.	Cardiac Dilatation.	Baths and exercises.	Marked improvement.	Death.
I. A.	Chronic Nephritis.	Baths only.	No improvement.	Death.
G. L.	Mitral Stenosis.	Baths and exercises.	Marked improvement.	Death.
G. S.	Glycosuria and Dilatation.	Baths and exercises.	No improvement.	No improvement.
B. C.	Dilatation and Chronic Nephritis.	Baths and exercises.	No improvement.	No improvement.
Miss B.	Dilatation and Tachycardia.	Baths and exercises.	Improvement only during treatment.	
W. W., colored	Dilatation and Sclerosis.	Baths only.	Marked improvement.	Well.
J. H.	Mitral Insufficiency.	Baths and exercises.	Marked improvement.	Well.
Mrs. L.	Tachycardia.	Exercises only.	Marked improvement.	Well.

Summary: Four deaths; in two no improvement; in one, improvement during treatment only; and three continued improvement.

My cases comprise seven, with five deaths, one marked improvement during treatment and one complete recovery, understanding, of course, by recovery, not repair of valve damage, but simply complete restoration of cardiac compensation.

I desire, however, to state that in none of these cases was the bath treatment begun until all other methods had been given a fair trial and had failed, and that five of the patients were inmates of our city hospital, placed at my disposal through the kindness of Dr. Otto Sutter, so that we must make allowance here for the kind of humanity that drifts into our public institutions, and for the kind of hygienic influences to which the patients are there exposed, as to shelter, food, air, etc., in the present temporary and unfatisfactory buildings our city hospital has been obliged to occupy since the tornado two years ago. Especially is this latter consideration important, for in one or two of my cases, I think the fatal result attributable in a measure to the draughts and chillings to which the patient was unavoidably exposed after the baths. The abbreviated notes of these cases are as follows:

Case 1.—E. B. male, aged 22, entered the City Hospital Dec. 2, 1897. Had symptoms of cardiac disease for the past three years; for past four months failure of compensation has gradually increased, and is now complete, with general anasarca and great dyspnea. Diagnosis, mitral stenosis and regurgitation, small amount of albumin in urine. Given baths No. 1 strength on December 4 and 5 with apparently no improvement in his symptoms. Failure of compensation steadily increased. Patient died Dec. 9, 1898.

Case 2.—J. O'R. male, aged 35, entered the City Hospital Oct. 14, 1897. Diagnosis, mitral regurgitation; feet edematous, dyspnea marked on exertion; no renal lesion. Given baths (No. 1 and 2 strength) and exercises from June 27 to July 29, 1898, during which time the apex-beat changed from 9.75 cm. on June 29 to 8.5 cm. on July 18 to left of median line. Urine rose from 450 c.c. on June 29 to 2700 c.c. on July 29.

Circumference of ankle was reduced from 29 to 27 cm., dyspnea had also greatly decreased and patient looked and felt much improved. Unfortunately, exposed to draught on night of July 29, he developed croupous pneumonia, from which he died July 31. But for such an unfortunate complication this case promised a good result.

Case 3.—A. W., male, aged 41, entered City Hospital Oct. 13, 1897. Had some cardiac symptoms for three years; considerable disturbance of compensation for past three months. Diagnosis, aortic regurgitation: no renal lesion. Given baths from October 26 to November 16. Apex beat reduced from 16 cm. on October 26 to 11.5 cm. on November 12. On October 29, he was able to lie down, which he had been unable to do for two weeks. From November 3, however, he began again to fail and finally succumbed, November 22.

Case 4.—J. H., male, aged 45, entered City Hospital June 10, 1898. Diagnosis, double lesion of aortic and mitral orifices. Given baths and movements from June 29 to August 17, urine increased from 325 c.c. July 7 to 1400 c.c. July 28. Apex reduced from 10.5 cm. June 29 to 9 cm. August 6. Appeared to improve somewhat up to about August 1, when edema increased, and patient gradually went downward toward a fatal termination.

Case 5.—W. McG., male, aged 32, entered the Hospital Aug. 27, 1897. Diagnosis, mitral and aortic insufficiency. Died Sept. 20. Baths given from September 12 to September 17. Beyond a transient reduction of edema, and a change of apex-beat from 13 to 11.25 cm. the course of the disease did not seem to be in any way influenced. As is often the case in aortic regurgitation, the end in this case came suddenly, during an effort at getting from the bed to the bathroom.

Within one and one-half hours after the bath on April 4, 42½ ounces of urine were passed. So marked, indeed, had been the improvement in every way in this case, that the patient unfortunately imagined himself a well man, and suggested discontinuance of treatment. Later on, symptoms recurred, and under treatment by other methods and in other hands he finally succumbed, some time, I believe, in the latter part of September.

Here then, in this case was certainly obtained a marked relief of symptoms for a considerable period of time, which perhaps, might have been greatly extended had the patient submitted his case entirely to his physicians. In the seventh and last case a result was obtained that, I think, you will grant me was truly ideal.

Case 7.—A. D. female, aged 17 years. Seen Jan. 30, 1898, at St. Mary's Infirmary, through the courtesy of Dr. W. A. McCandless. More or less heart symptoms since an attack of intermittent fever in 1891, which symptoms were aggravated by an attack of rheumatism, of one month's duration, in 1896. Entered hospital about Jan. 10, 1898, since which time had been steadily growing worse, in spite of most appropriate treatment until condition had become most pitiable. Edema of lower extremities very great. Had sinking spells in which she was every minute expected to expire; could not leave her chair day or night. Diagnosis, mitral regurgitation with complete failure of compensation; patient very anemic. Given baths and later on movements from February 1 to March 15, 22 baths in all. After second bath, on February 4, she spent a better

Chart for Case No. 7, Showing Method of Recording Observations.
Diagnosis.—Mitral Insufficiency with Complete Failure of Compensation.

Date, 1898.	Bath temperature.	Bath number.	Time.		Before.		First half.		Second half.		Immediately after.		10 minutes after.		Point of maximum impulse in inches.			Urine in 24 hours.		Remarks.
			Beginning.	End.	Respiration.	Pulse.	Respiration.	Pulse.	Respiration.	Pulse.	Respiration.	Pulse.	Respiration.	Pulse.	Before.	During.	After.	Amount.	Specific gravity.	
February 1	98	1	3:15	3:21	30	130	44	138	40	138	34	136	28	132	5¼	4¼	4¼	26½	1020	
February 4	96	1	2:50	2:57	37	118	42	140	42	124	48	128	44	128	5¼	4½	. . .	26	1020	Best night since entering hospital
February 7	98	1	2:42	2:49	23	105	32	126	36	114	. .	. .	20	110	4¼	4	4	28	1025	Can rest comfortably in recumbent posture
February 9	92	1	3:36	3:45	24	110	28	110	32	116	26	112	20	108	4½	. . .	4¼	14	1025	
February 11	92	1	2:46	2:55	14	110	30	122	24	118	16	114	17	110	4⅜	4	4	28	1030	Patient asleep ten minutes after bath.
February 14	92	1	3:20	3:28	15	114	22	120	22	120	18	116	. .	. .	4¼	4¼	4¼	42	1010	Slept well from 8 P.M. to 5 A.M.
February 17	. .	. .	3:03	3:14	18	116	. .	. .	22	122	20	122	19	112	4½	4½	4¼	38	1010	Only now slight edema over tibiæ.
February 21	90	2	3:01	3:14	18	110	. .	. .	22	111	20	111	19	108	4	4	4	42	1012	
February 24	88	2	2:59	3:15	26	85	. .	. .	23	98	26	105	24	98	3⅝	3⅝	3⅝	48	1010	
February 28	90	2	4:08	4:24	20	98	28	100	28	104	23	92	20	94	4	4	4	43	1010	
March 3	88	2	2:15	2:31	22	100	23	97	25	98	21	93	. .	. .	. .	. .	. .	35	1012	
March 7	88	2	4:46	5:04	22	88	20	88	25	96	20	91	22	88	3¾	3¾	3¾	. .	. .	
March 9	88	2	3:01	3:19	24	98	21	93	22	98	23	91	22	88	3¾	3⅝	3⅝	40	1010	
March 12	88	2	2:56	3:14	20	89	22	87	22	90	20	85	20	82	3¾	3¾	3¾	45	1012	Pulse regular.
March 19	90	2	1:40	1:58	22	82	24	85	22	90	21	74	21	88	3¾	3¾	3¾	. .	. .	Digitalis stopped, owing to symptoms of gastric irritation.
March 21	89	2	3:04	3:22	18	91	22	97	19	93	19	90	20	80	3¾	3¾	3¾	. .	. .	Apex-beat well defined; relative dulness at mammary line; entirely free of symptoms.

Case 6.—H. S., male, aged 42 years; seen in consultation with Dr. John P. Bryson, Feb. 27, 1898. History of more or less dyspnea, dating back for five or six months. Heart enlarged and dilated, but impossible to determine exact outlines or position of apex, due to amount of adipose tissue and feebleness of heart's action. Pulse sclerotic, no cardiac murmurs: urine contained on several examinations from .25 to .5 per cent. albumin, and a few hyaline and granular casts. Lower extremities enormously edematous; has been confined to house for weeks, and for about a week has been unable to lie down in bed. What little sleep he has had, has been in snatches while sitting up in an easy chair. Diagnosis, chronic interstitial nephritis, artero-capillary sclerosis, hypertrophied and dilated heart. Given baths and movements from March 2 to April 20, 1898, during which time compensation was sufficiently restored that patient obtained a good rest at night in recumbent posture; could get in and out of tub by himself, when at first he had to be lifted. All edema completely disappeared except some occasional slight puffiness of feet. He was soon able to get out for a drive and get down again on a visit to his place of business. Amount of urine for twenty-four hours, which on March 5 was only 13 ounces, increased to 87 ounces, as the maximum quantity on April 4. In fact, the effect of the treatment on the secretion of urine seemed almost, in this case, marvelous. For example, on April 2, patient urinated just before bath, and in thirty minutes after the bath passed 18 ounces, and within an hour passed altogether 22 ounces. night than she had since entering hospital. February 10, slept well from 10 P.M. till 5 A.M.; February 15, had been sleeping from seven to eight hours without awakening, since last note. February 28 had been sleeping all night and eating everything offered her. Could now get about the wards and halls. March 16. Patient menstruated today, first time in two years. Pulse was reduced from 140 February 4 to 70 March 15; respiration from 42 to 20 in the same time; apex-beat from 5¼ to 3¼ inches. Urine increased from 26 ounces on February 4 to 53 ounces on February 13; entire disappearance of edema; on leaving hospital, patient was entirely free of symptoms.

She was at my office on July 10, when she had gained 16 pounds in weight, weighing 134 pounds, which is more than she had ever weighed before. She appeared the picture of health; had been menstruating regularly every month since leaving hospital. Had also been completely free of symptoms, and had been able without discomfort to remain steadily at her work, that of a bookbinder.[1]

One very striking effect of the bath in this case was the quieting, soothing influence exerted, causing the

[1] She was at my office again on Nov. 20, 1898, when she was perfectly well, and stated she had been so since her last visit. She stated she then weighed 136 pounds.

patient as soon as put to bed to fall almost invariably into a tranquil nap of one or two hours' duration, from which she awoke refreshed and strengthened.

Of the beneficial result of the bath treatment in this case, I am satisfied beyond any question, and had the girl not received the baths and movements, she would have, I am thoroughly convinced, succumbed to the heart affection.

In estimating the efficacy of the method in the preceding cases, we must take into consideration besides what I have already alluded to, the fact that three out of the five fatal cases had aortic regurgitation, and it has been the observation of the advocates of the method that this class of cases have not responded well to the treatment. One of the remaining fatal cases had mitral stenosis, which is also notably an unfavorable lesion under any plan of treatment. Case 2, which was one of pure mitral regurgitation, gave every promise of a favorable result before the onset of pneumonia, which complication might, I think, have been avoided under different surroundings; nor can the fatal result in Case 6, that of nephritis and arteriosclerosis, be attributed to the bath treatment, for under it the patient's condition had improved marvelously, and the end only came after he had abandoned the method for some time; so that properly speaking we should only classify four of my seven cases as apparently not being at all controlled by the bath method. On the other hand, it must be understood that reliance was by no means placed on the bath and exercises alone, to the exclusion of the older and better-known remedies, which were employed as the indications arose for their use, in conjunction with the bath treatment.

A brief summary of the foregoing seven cases with results is as follows:

Case.	Diagnosis.	Treatment.	Condition during treatment.	Result.
1	Mitral stenosis and regurgitation.	Baths only.	No improvement	Death.
2	Mitral regurgitation.	Baths and exercises.	Marked improvement.	Death.
3	Aortic regurgitation.	Baths only.	Improvement at first	Death.
4	Double aortic and mitral lesions.	Baths and exercises.	Improvement for a while	Death.
5	Aortic and mitral regurgitation	Baths only.	No improvement	Death.
6	Chronic interstitial nephritis, arterio-capillary sclerosis, dilated and hypertrophied heart.	Baths and exercises.	Marked improvement.	Death some time after abandoning treatment.
7	Mitral regurgitation.	Baths and exercises.	Marked improvement.	Well.

But even a plan of treatment that will save one life and bring complete, though temporary, relief of all symptoms in another must be certainly looked upon as a valuable aid to us in dealing with a group of cases such as those just described, all which were completely uncontrollable by any of the older methods; while, on the other hand we have just seen that Camac was fortunate enough to save three out of his series of ten cases.

In conclusion, I desire to acknowledge my indebtedness to the valuable contributions of Brunton, Babcock, Camac and Gibson; also to thank Dr. Sutter and his corps of physicians at the City Hospital, especially Drs. Dean and Amyx, for their kind co-operation, and Drs. Hoge and Bryan for much valuable assistance in supervising the work in my absence.

116 North Grand Avenue.

LOOMIS SANITARIUM FOR CONSUMPTIVES.

ANNUAL REPORT.

BY J. EDWARD STUBBERT, M.D.

PHYSICIAN IN CHARGE.

The following report represents the work of the Loomis Sanitarium, located at Liberty, Shawangunk mountains, Sullivan county, N.Y., for the year ending Nov. 1, 1898:

The number of patients in the sanitarium Nov. 1, 1897, was 78; admitted since, 126; total, 204. The number of patients in the sanitarium Nov. 1, 1898, was 47; patients discharged cured having numbered 28, discharged with disease arrested 11, discharged improved 67, discharged who remained stationary 6, discharged unimproved 41, while 4 had died.

As to the condition of patients when admitted, 17 were in the incipient stage,[1] 58 in the incipient stage with bacilli, 102 moderately advanced,[2] and 27 far advanced[3].

Class 1 (patients who remained three months or less in the sanitarium).—The condition when admitted showed: Incipient stage without bacilli, 9; incipient stage with bacilli, 23; moderately advanced, 31; far advanced, 12; total 75. The condition when discharged showed: Cured, 10; disease arrested in 5; improved, 35; stationary, 4; unimproved, 19; deaths, 2; total, 75.

Class 2 (patients who remained in the sanitarium more than three months)—The condition when admitted showed: Incipient stage without bacilli, 4; incipient stage with bacilli, 24; moderately advanced, 44; far advanced, 10; total, 82. The condition when discharged showed: Cured, 18; disease arrested in 6; improved, 32; stationary, 2; unimproved, 22; deaths, 2; total, 82.

The number of patients whose sputum contained bacilli on admission was 187, with 37 whose sputum was free from bacilli on discharge, while 53 had hemorrhage before admission, 10 had hemorrhages in the sanitarium, 153 gained in weight, 25 remained stationary in weight, and 26 lost weight. The average gain per week per patient was two pounds, the average loss per week per patient was one pound, the greatest monthly gain was fourteen pounds, the greatest monthly loss ten pounds, and the greatest gain for one patient thirty pounds.

During the year there were in the infirmary 83 patients, of whom 12 were in the infirmary twice.

A summary of the condition of patients still in the sanitarium shows that the bacilli disappeared in 3 cases, diminished in number in 11, while cough decreased in 32 and disappeared in 2 cases, and the physical signs improved in 33, weight was gained in 38 cases, remained stationary in 3, and was lost in 6.

By comparing these figures with my annual report for 1897, published in the *Philadelphia Medical Journal* of March 12, 1898, p. 467, the following increase in good results among patients discharged during these two years will be noted: During the first year 8 per cent. of the patients discharged had lost their tubercle bacilli; during the past year 23 per cent. of those discharged had lost their tubercle bacilli. During the first year 73 per cent. of those discharged gained in weight, while during the past year 97 per cent. of those discharged had gained in weight. During the first year 13 per cent. of those discharged were cured, while during the past year 17 per cent. of those discharged were cured. During the first year 10 per cent of those discharged had their disease arrested, while during the past year 7 per cent. had their disease arrested. It is interesting to note that of those patients discharged after a residence of three months or less at the sanitarium, 6 per cent. were cured, while among those remaining longer than three months, 11 per cent. were cured.

The basis of treatment in all cases has been *climatic, hygienic and dietetic.* The climate of Liberty is well adapted to the treatment of tuberculosis throughout the year, but there is even more marked

[1] Incipient stage.—Slight localized involvement of lung, with little or no constitutional disturbances.

[2] Moderately advanced.—More general consolidation of lung, with constitutional disturbances and beginning of softening, or single cavity.

[3] Far advanced.—Softening and excavation, with marked constitutional disturbances.

improvement among the patients during the winter months than in summer. The elevation, 2300 feet, is within those limits generally conceded to be most advantageous for lung troubles; this altitude, with the peculiarly dry atmosphere and abundance of sunlight, furnishes all the conditions necessary in the climatic and hygienic treatment of incipient cases of tuberculosis. Malarial fevers are unknown here excepting when imported. A clinical fact that has struck me rather forcibly is that while strong winds are generally supposed to be detrimental to the class of patients under consideration, our patients brave with impunity cold and northwest winds. I have seen eighty patients gather for their meals three times a day, from their various cottages at the Administration Building when the snow has been one to two feet deep, and almost a blizzard blowing, without the least detrimental effects. On the contrary, it seemed to improve their appetites and digestion. I have not seen one case of bronchitis or influenza among our patients that could be attributed to braving the elements. The experiences encountered and the results obtained during three cold seasons at this Sanitarium seem to tend to revolutionize the popularly accepted ideas of the injurious effects of winds and stormy weather upon incipient cases of tuberculosis. In this connection I wish to refer to the question of exercise. Much has been said and written against allowing tuberculous patients to walk or exert themselves to any great extent, especially if the temperature ranges above the normal point. It is a rule with me to allow all patients whose evening temperature does not reach above 100 degrees F. to walk moderately, and if the temperature is not above 99 degrees F., no restrictions at all are placed upon them in this respect; but they are encouraged to gradually accustom themselves to pedestrian tours extending from two to ten miles daily. I have never seen any untoward result from this exertion on the part of patients, and I am fully convinced that it is a mistake to encourage any such patients in taking the rest cure. We are seeking to improve the general nutrition of our patients in order to enable them to overcome a specific poison, and it would seem unwise to impair their general nuturition by compelling them to no nothing but eat, sleep and sit.

In the way of auxiliary treatment of individual cases the following remedies have been used; antitubercle serum, antistreptococcic serum, ichthyol, ichthalbin, kalagua, creosote, guaicol, cod-liver oil, oil of cinnamon, hot medicated air inhalation, pneumochemic treatment, multinebulizer, ozone inhalations and electric treatment.

SERUM.

Our investigations in the use of antitubercle serum have been continued with the following results:

Of the 48 patients treated, 18 were in the incipient stage, 30 moderately advanced. The physical signs improved in 38, remained stationary in 2 and were unimproved in 8. Expectoration decreased in 40 cases, and remained stationary in 8, while the temperature decreased in 26 and was unchanged in 22. Cough decreased in 40 and remained stationary in 8, while the appetite improved in 40 and remained stationary in 8. Tubercle bacilli disappeared in 10 cases, while 3 had none, 21 decreased and 14 remained stationary. Weight increased in 38, was stationary in 7 and 3 lost weight. Summary: Cured 27 per cent.; improved, 43.75 per cent.; stationary, 23 per cent.; unimproved, 2.25 per cent.

As will be seen from the foregoing table, 13 of the 48 cases treated, or 27 per cent. have lost their tubercle bacilli; in 43.75 per cent. the tubercle bacilli have decreased, as against 20 per cent. of last year. I have lately examined between 15 and 20 cases treated with serum, and have not found one that had redeveloped the disease; on the contrary, all have been enabled to remain in their homes and at their work; all these cases have been away from the Sanitarium for periods varying from 6 months to a year and a half. The general effects of this United States Government serum of de Schweinitz during this year upon cough, expectoration, temperature, tubercle bacilli, etc., are more or less the same as reported last year. As I stated at that time, I am not ready to pin my faith to serotherapy in tuberculosis; but in view of the fact that as far as bad results are concerned it has proved negative, and that a comparatively fair number of cases have apparently improved under its administration, I believe it to be the duty of the profession to continue clinical investigation along this line.

A few cases that have been treated in New York City with this serum have been examined periodically by Dr. Loomis and myself, without our being able to arrive at any positive opinion. Dr. Loomis' experience with serum among hospital patients has been, I believe, absolutely negative as far as good results are concerned. Concerning those patients treated in private practice in this city and Brooklyn, reports of attending physicians have varied. It is difficult in these cases to separate either climatic or moral influences from any that might be exercised by the serum. The three apparent effects noted above all others, from the use of this serum, have been *reduction of temperature, decrease of tubercle bacilli, and possible immunity* conferred upon patients after returning to their homes. I have discarded its use at the Sanitarium in all but incipient cases. To my mind the effects of this serum are: 1, not deleterious; 2, patients show a better percentage of results than under creosote or any other drug, without their deleterious effects; 3, the moral effect is such that even if we gain nothing in the way of specific action by its use, we are contenting the patient while he is under good climatic and hygienic environments.

Fischer's serum.—During the year we have placed four cases upon Fischer's serum, but as none of them did well upon it, they were placed upon other lines of treatment.

Oxytuberculin.—Dr. Hirschfelder very kindly forwarded us some of his oxytuberculin, which was faithfully tried in one or two cases, until the patients rebelled against having such a large quantity of fluid injected. The Doctor has informed us that if we we would use hot water massage after each injection, the patient would not complain of any discomfort; hower, it has been impossible to devote the time for this purpose.

Antistreptococcic serum.—While the results from the antitubercle serum have been somewhat gratifying, its use would generally seem to be restricted to the incipient stage and those cases showing a pure culture. The most alarming symptoms and trying complications with which the physician meets in tuberculosis are due, not to the tubercle bacillus, but to the cocci of mixed infection. The most virulent one of these seems to be the streptococcus, and the profession is watching with great interest the result of the use of Marmorek's antistreptococcic serum, in the hope that in tuberculosis with mixed infection (the most common variety met with), the disease may

be reduced to one of simple tuberculous infection that might more readily yield to antitubercle serum. This hope is a legitimate one in view of the excellent results reported from its use in erysipelas, active abscesses, pelvic inflammation, otitis media, and acute and chronic suppurative processes generally. With this end in view we were led to employ, in ten cases, Pasteur's antistreptococcic serum (selecting, of course, only such cases as showed streptococci), believing that, if we could neutralize the secondary infection, we would leave a clear field for the supposed action of the antitubercle serum. In the first case only one injection was employed; expectoration ceased immediately for a number of days, and then returned in diminished quantity; on examination the streptococci were found to be far less numerous and smaller in size. The next case had suffered from chronic bronchitis for three or four years, and developed tuberculosis a short time before entering the Sanitarium, about two years ago. Tubercle bacilli disappeared under treatment, but bronchitis remained. The sputa were mucopurulent in character and contained streptococci. One injection of the antistreptococcic serum was given after which the expectoration increased materially. After a few weeks the patient began to improve, expectoration decreased somewhat in quantity and became very markedly less purulent in character. This patient is now living in New York and I have lost trace of her. The next patient had a dry cavity at the apex of one lung, and had done very well here at the Sanitarium. She was given four injections of the antistreptococcic serum, after which the streptococci disappeared. This patient is still an inmate of the Sanitarium, and the sputa still contain tubercle bacilli. The next case was that of a young lady whom I had treated first as a private patient, then as an inmate of the Sanitarium for fifteen months. Tubercle bacilli disappeared from her sputum, the physical signs cleared up, and she was about to return to her home cured of tuberculosis. However, she also had a history of chronic bronchitis, but with scanty expectoration. About the time she was about to be discharged from the Sanitarium, numerous and long chains of streptococci were discovered in her sputa, and she was immediately given an injection of 10 c.c. of antistreptococcic serum, and two days later, a second injection of 10 c.c. After the first injection a slight increase of expectoration was observed, but a few days after the second injection no streptococci could be found; they remained absent about four months, at which time they reappeared. In a fifth case three injections were given, but without effect. The sixth case was given two injections at intervals of ten days; after the first injection the streptococci were greatly reduced, and after the second they disappeared entirely; they had not reappeared at the end of six weeks, when the patient returned home. Case 7 had one injection of antistreptococcic serum, after which the streptococci disappeared and remained absent for two months, then reappeared in large numbers. About half an hour after the injection the lobes of both ears swelled; this condition lasted about an hour, and then subsided. Case 8 had one injection of the serum, after which the streptococci disappeared; however, after a few weeks a few were again found in the sputum. Case 9 was a man with numerous streptococci; he was given three injections of the serum at intervals of two days; the streptococci gradually decreased in number until none were found. In this case, however, annoying neuralgic and rheumatic pains followed the use of the serum; they were finally relieved by purging and massage. Case 10 was a patient whose sputum contained a moderate number of streptococci, which entirely disappeared after two injections of the serum; cough and expectoration decreased materially, while tubercle bacilli remained numerous. If, as some of the advocates of antitubercle serum contend, the cause of failure in many cases is due to mixed infection, the successful use of Pasteur's serum would solve a great part of this riddle before us. One point that I suppose will be immediately noted is the apparent slowness of action of this serum upon the streptococcus in these cases of chronic infection, as compared with the reports from time to time of its rapid action upon the same germ in cases of acute infection.

Throat cases.—During the past year forty cases of tuberculous laryngitis have been treated at the Sanitarium; twelve of these patients are still in the Sanitarium, and twenty-eight have been discharged. The combined statistics that I have been enabled to gather from all points in Colorado show 25 per cent. of cures among cases of laryngeal tuberculosis in the ulcerative stage. It is gratifying to be able to report that at the Loomis Sanitarium 43 per cent. of the ulcerated cases were discharged *cured*, as follows: fourteen cases were infiltrated and ulcerated; of these six were healed; in three the ulceration was lessened; three remained stationary, and in only two was the ulceration worse. Of the remaining fourteen discharged, namely, those with infiltration without ulceration, four, or 29 per cent. were cured; five, or 35 per cent. were improved; two remained stationary, and three were unimproved.

In 40 cases treated the infiltration and ulceration healed in 6, improved in 3, was stationary in 3, and worse in 2, a total of 14 cases, while in infiltration without ulceration the cured cases were 4; the improved, 5; the stationary, 2; the unimproved, 3, a total of 14. Of the 28 discharged, weight was gained in 16, lost in 5, and 7 remained stationary in weight. Of cases still in the Sanitarium with infiltration and ulceration, 2 healed, 2 improved and 1 remains stationary, while of those with infiltration without ulceration, the cured numbered 1, the improved, 4, and 2 remain stationary.

Ichthyol.—Ichthyol in enteric coated pills has been used with very satisfactory results. This remedy seems to be indicated, not only in pulmonary tuberculosis, but in cases involving the intestines and genito-urinary tract. Very large doses of this drug can be tolerated by most patients without any gastric disturbances ensuing, as high as 4 grams daily may be taken in most cases. Ichthalbin seems to act better in some cases than ichthyol, and may be given in daily doses of from 3 to 6 grams.

Of the 34 cases treated, 7 were in the incipient stage, 17 moderately advanced and 10 far advanced. The physical signs improved in 23, were stationary in 5 and increased in 6, while tubercle bacilli were not present in 2, disappeared in 3, decreased in 14, remained stationary in 15; and expectoration decreased in 22 and remained stationary in 12. Again, cough decreased in 22 but was stationary in 12, while weight increased in 24, was stationary in 4 and 6 lost weight. The general condition improved in 26, but was unimproved in 8. *Summary:* Cured, 15 per cent.; improved, 53 per cent.; stationary, 15 per cent.; unimproved, 17 per cent.

Kalagua.—During the latter part of the year covered by this report a South American drug named "kalagua" was brought to my notice, at the same time that it was placed in the hands of specialists in Belgium, and one or two in this country. The merits claimed by the advocates of this drug are: 1, that it has no deleterious effects upon the alimentary canal;

2, small doses of the drug very soon produce saturation of the patient, evidenced by its odor in the breath, urine and perspiration. In view of the statistic report forwarded to me by the president of the Medical National Society of Colombia, I employed this drug in a few cases which had failed to improve under every other mode of treatment, with the following results:

The cases treated numbered 6, and of these 1 was in the incipient stage, 3 moderately advanced and 2 far advanced. The physical signs and general condition improved in all of the 6. Expectoration decreased in 4 and remained stationary in 2, while cough decreased in 4, remained stationary in 2, and the bacilli disappeared in 1, decreased in 3, were stationary in 2. The weight increased in all the 6 cases.

Creosote.—Creosote and its derivatives have been used in very few cases; as I stated last year, I am not at all favorably inclined to the use of this drug, on account of its deleterious effects upon the stomach, intestines and kidneys.

The cases treated were 23—8 in the incipient stage, 13 moderately advanced and 2 far advanced. The physical signs and general condition improved in 16, but were unimproved in 7. Expectoration and cough decreased in 16 and remained stationary in 7, while the bacilli disappeared in 4, decreased in 10, and remained stationary in 9. The weight increased in 16, remained stationary in 5, and 2 cases lost weight.

Guaiacol.—Twelve cases were treated, 3 being in the incipient stage, 5 moderately advanced, and 4 far advanced. Of these, the physical signs improved in 9, remained stationary in 2, and increased in 1 case. Expectoration decreased in 8, remained stationary in 4, and cough decreased in 9 and remained stationary in 3. The bacilli disappeared in 1 case, decreased in 7, remained stationary in 4, while weight increased in 9, remained stationary in 2, and 1 case lost weight under this guaiacol treatment. The general condition improved in 9, but was unimproved in 3.

Cod-liver oil.—This has been used in some cases during the colder months, but no series of cases has been placed upon it.

Oil of cinnamon.—This, in daily doses of 30 to 40 drops, has been used with fairly good results.

Three cases were treated, 1 being in the incipient stage, 2 moderately advanced. The physical signs and general condition was improved in 3, expectoration and cough decreased in 3. The bacilli disappeared in 1, but remained stationary in 2, and weight increased in 2, remaining stationary in 1 case.

Hot-air inhalations have been used in 61 cases with the following results:

Cough decreased in 47, increased in 4, and remained stationary in 8; treatment stopped on account of hemoptysis, 2. Expectoration decreased in 49 and remained stationary in 12.

The following are some of the drugs which have been used, either singly or in combinations that seemed indicated in individual cases in these inhalations: Ichthyol, thymol, eucalyptol, creosote, oil of gaultheria, benzoic acid, oil pinus sylvestris, oil of peppermint, oil of camphor, terebene, naphthalin, menthol cryst., oil tar, tincture of iodin, and oil argentum.

Pneumochemic treatment.—This form of treatment has been used in very few instances. It seems to be indicated in a few cases suffering from bronchorrhea and excessive and irritable cough; owing, however, to the fact that it deprives the patient of an out-door life for three or four hours daily, it has been used only in extreme cases, and until such time as the bronchorrhea was sufficiently decreased to allow the patient to be treated by other methods.

Ozone.—Inhalations of ozone and static electricity have been used as general tonic treatment, with apparently good results.

THE CLIMATE OF COLORADO.

ITS INFLUENCE ON DISEASES OF INFANTS AND CHILDREN.

Presented to the Section on Diseases of Children at the Forty-ninth Annual Meeting of the American Medical Association, held at Denver, Colo., June 7-10, 1898.

BY C. F. GARDINER, M.D.

COLORADO SPRINGS, COLO.

I had intended to prepare a paper for this meeting upon the difference, if any, that exists between the life history of infants and children in Colorado, and that of infants in lower and more humid climates, such, for example, as our Middle and Eastern States. I had hoped to derive my data from comparing the statistics of boards of health, both East and West, thus insuring a reasonable amount of accuracy, or, at least, an approach to accuracy, far more desirable than the often misleading deductions taken from a few observers. This work, however, I was forced to abandon—at all events as first outlined—from the fact that with the material available it was clearly impossible to construct a series of comparative tables that would be reliable or sufficiently extensive for my purpose. However, a few comparative data that fulfilled the requirements as regards number and accuracy, and which I will mention later, were obtained by this method. I then endeavored to secure the census of opinion from the medical profession of Colorado, and sent out a circular letter to nearly all the members of the State Medical Society asking their opinions, first, in regard to the effect of the climate of Colorado upon the growth and development of infants and children, as compared to lower and more humid climate, and, second, if the climatic conditions in Colorado modified in any way the diseases of children. I enclosed a list of twenty-two questions concerning the diseases of children most frequently seen. From the answers received to this circular I selected only thirty-three letters as combining enough experience and accuracy for reliable data.

No one can, I think, exercise too much care in placing reliance upon statements made regarding effect of climate. Especially is this true in the case of children, who, being in formative or developmental zones of life, are much more susceptible to the different factors of environment than the adult. Also, racial characteristics and tendencies, food, habitation, etc., have to be considered before climatic effects are studied; and even the climatic effects vary in a State like Colorado. It is true that the rainfall is scanty all over its entire area, that the excess of sunshine is unusual, and that generally speaking, all the State is at least a mile high; but during some years spent in a country practice in Colorado covering a wide area, when I often included in my professional trips the deep snows of the high passes and then, suddenly, the heated and dusty low valleys, I was frequently struck by the variations in temperature, humidity, soil, wind, etc., that exist within comparatively small sections. The sunshine, dryness and altitude are, it is true, pretty constant factors all over the State, but when in a trip of some fifty miles I have used with comfort a buffalo coat at 2 A.M. and been suffering with the heat under the shade of an umbrella, in shirt-sleeves at noon, it is needless to mention the severe and abrupt changes due to altitude or other causes in our climatology.

In our State we have people of all kinds and conditions. Far from the railroads, or in thickly-settled regions, we have a people whose children inherit

a robust physical constitution, and whose environment, though no doubt faulty in details of food, personal hygiene, etc., has the great health-giving properties of the best air all the time, day and night, and constant physical exercise. Such communities are, however, entirely too limited in number to draw conclusions from, even if their study were practical; and it is, no doubt, far more practical to study the life history of children in relation to altitude, dryness, etc., from settled communities or cities, where the climatology is carefully recorded and children intelligently observed. I have, therefore, as a rule, taken testimony regarding children's diseases only from such sections of the State that I felt certain could furnish data based upon numbers enough and local climatologic data sufficiently accurate to be reliable, such a condition being found in cities. From the thirty-three answers received, the following general indications covering the influence of Colorado's climate upon infants and children could be very clearly made out:

There was a very strong and constant opinion regarding the effect of climate in development; 32 out of 33 answers received clearly stated that the influence of this climate was generally favorable to the growing child. And such a result was not unexpected, because with a dry soil and excess of sunshine, open-air life is induced, and other conditions remaining the same must influence the physical development of children favorably as compared to other and more humid climates.

The diseases of the respiratory system seemed to be uninfluenced. This was a surprise, as one would naturally expect, at least in pneumonia, capillary bronchitis, etc., to have increased severity due to altitude embarrassing respiration, if nothing more.

In diseases of the heart, the general verdict was that the climatic effects were unfavorable, although two answers were that the climate was favorable, and four reported no effect due to climate.

In all diseases of the gastro-intestinal tract, characterized by diarrhea, such as enterocolitis, cholera infantum, dysentery, simple diarrhea, etc., the testimony was all overwhelmingly in favor of the climate of Colorado exerting a specific effect, both in rendering all such diseases much less frequent and in diminishing their virulence when they did occur, the fatality in such cases in infants and children being small in Colorado as compared to States with less favorable climatic conditions. This unusually small number of diarrheal diseases and the low mortality from the same in Colorado is, however, not at all surprising when we consider the etiology of such diseases. Their time of greatest prevalence and destructive effects upon infants is during the summer months, when continual heat is enervating, and fermentive changes in all foods are apt to be active. The heat in Colorado is never the humid, relaxing, long-continued physical depressor found in many of our large cities, and even rural districts, elsewhere. The sun is hot, withering and fierce, at times, but in the shade, and at night, the air is cool and comfortable. The milk-supply, due to non-septic dry air, moderate thermometric range, and, in most cases, better physical condition of our cows, insures a better nutriment in bottle-fed babies; while the mother who nurses her baby has also this great advantage of environment, and gives to her child the vigor imparted by air and sunshine.

The reports from nervous diseases were to the effect that chorea was more frequent in Colorado than had been observed elsewhere. Cerebrospinal meningitis, to the average observer, was unknown. Tubercular meningitis, rheumatism, measles, and scarlet fever were practically negative, from reports. Diphtheria was also negative.

Tuberculosis was affected favorably, and the infrequency of the occurrence of all kinds of tuberculosis, non-imported, I have already shown.[1]

To compare as nearly as possible the mortality due to diseases of children, the above records are as complete as I was enabled to obtain, and, for the ground they cover, are accurate.

Briefly, then, the influence of Colorado's climate upon child life is that the normal physical development of the child is encouraged and rendered more perfect. The great scourge of infant life, the diarrheal diseases, consequent upon humidity and prolonged heat, is much modified, both infrequency and mortality, the average rate of mortality from cholera infantum in Denver being 29.6 per 100,000 inhabitants in 1895, Chicago, 75.01 in 1896, and in some cities more. The infrequency of all forms of tubercular trouble originating in Colorado is well known, and need not be mentioned. Malaria, which, in many sections, directly or indirectly influences the infant and child life, is actually unknown in Colorado.

In criticising the above it may be suggested that possibly there are also disadvantages incident to Colorado's climate which are fully as fatal to child life as some of the dangers escaped. To this there is no answer. While the popular impression seems to be that the high dry climate induces rheumatism and nervousness, and is fatal in many forms of heart disease, etc., the carefully observed facts do not bear out any such inferences, and a child born in Colorado certainly has a positive physical advantage. The lungs are more fully expanded. The blood has a more powerful germicidal action. The circulation is better, from a physiologic stimulation due to altitude. The muscular system, from exercise in the open air, is vigorous, and gastro-intestinal diseases, tuberculosis and malaria, are not only less frequently encountered, but when they do occur are not so fatal.

[1] The Dangers of Tubercular Infection and their Partial Arrest by Climatic Influences. Amer. Jour. Med. Sciences, February, 1890.

PELVIC MASSAGE.

A GENERAL OUTLINE ACCORDING TO R. ZIEGENSPECK, M.D., PROFESSOR OF GYNECOLOGY AND OBSTETRICS, ROYAL MAXIMILIAN UNIVERSITY, MUNICH.

BY F. H. WESTERSCHULTE, M.D.
CHICAGO.

No remedial agent dates from such a venerable epoch, no other has gained so much renown and found such widespread, useful application as has massage. In ancient times the uncultivated tribes of Africa and America, the Chinese and the Hindus used it to a great extent as the universal remedy for manifold ills and defects. From those prehistoric nations this mode of treatment seems to have been transmitted to the Greeks and Romans, who used it for therapeutic and hygienic purposes. Hippocrates was one of the first to recognize the value of the curative effects of massage, especially in diseases of joints. Having sunk more or less into oblivion during the Middle Ages it gradually came to the front again in the six-

teenth century. From France it then spread to the other European countries in the eighteenth century, and Sweden became the center of gymnastic movements and massage, which were extensively used in institutions and clinics. Billroth, Esmarch, Von Mosetig, Thiersch, Bergman, Von Mosengeil and others recommended massage very highly, and by degrees it found its way among the therapeutic measures for diseases of the internal organs.

In the last decade a new field for the employment of massage has been opened, and the results gained by it have unquestionably been so astonishing that it has conquered the recognition of the whole medical and scientific world. I mean massage of diseased female genital organs and adhesions, at once a happy and logical idea. These adhesions caused by cicatricial tissue—the sequelæ of previous inflammations of the uterus, its adnexa and surrounding tissues—glue the different organs together, thereby not only retarding their mobility, but often, in unison with other factors, producing a displacement of such organs. Since pelvic massage has exerted its influence, the treatment of female diseases has entered a new area; diseases which had before been regarded as incurable or only accessible to operations, have been cured by massage in a comparatively short time.

To Major Thure Brandt principally is the credit due of introducing massage into gynecology, and considering the fact that he was a layman, and consequently had to overcome almost insurmountable difficulties, we can but give him the highest credit. The method invented by Brandt as a layman was—as is usually the case in the beginning—jeered at and regarded with skeptical eye, but it soon demanded consideration and recognition, especially after Brandt had demonstrated the curative effects of his method on a number of female patients in the clinic of private-councillor Prof. Dr. Schultze at Jena.

There is no reason why the technic of pelvic massage can not be acquired by the aid of a good description, and practiced by every learned gynecologist and physician. An accurate diagnosis, however, is essential, and whatever manipulation is applied has to be done lightly and without using any force.

It was to be regretted, particularly by the general practitioner, that no special work on massage-treatment in diseases of women had heretofore appeared until Prof. Ziegenspeck issued his work, thereby filling out this gap in gynecologic therapy.

In order that this very valuable but much neglected therapeutic measure in gynecology might find its way more readily among the physicians in this country I have undertaken the task of translating Ziegenspeck's work into the English language and have taken special pains not to alter a word or sentence in such a way that it might convey a different meaning from that which the author wished to express. This method gains more and more in importance according as we are forced to acknowledge the not infrequent disappointing results of operative gynecology. It is especially gratifying that Prof. Ziegenspeck—who, by the way, has treated thousands of cases *successfully* with this method—on account of his extensive knowledge, experience, and manner of writing, knows how to adapt himself to the needs of the general practitioner. There are no means by which one can acquire diagnostic dexterity so quickly and so surely as by the practice of Brandt's method, and as soon as one is enabled to diagnose correctly he will, by the aid of Ziegenspeck's work, very often dispense with a specialist and gain excellent results, as above all, chronic cases will be of less frequent occurrence.

Ziegenspeck's work differs from other works on this method in so far that not only the method per se, but also the diseases in which it is indicated are described, and as the only disadvantage of the method consists in its tedious details, he has striven to omit everything superfluous and irrelevant. In such cases only in which the method cures more surely, quickly and pleasantly will it assert itself and stand the competition of more convenient methods.

After a short discussion on "Hygienic Gymnastics" as general treatment, the author proceeds to local treatment, and describes the diagnosis, and then the technic of massage. In the following chapters he gives the indications and contraindications for massage, together with a detailed description of those diseases in which this method promises best results. This part of the book is most valuable, as it gives indeed excellent illustrative descriptions of the special forms of diseases, symptoms, etiology, pathology, anatomy, and treatment, by massage and stretching, together with the competitive methods.

I wish to call attention to the chapters on "Chronic Peritonitis," "Retrodeviations," "Prolapse," and "Chronic Parametritis" particularly, and in the latter affection this method records the most positive results and the most signal victories. This disease, with the exception of endometritis, being the most common of female diseases, the gynecologist or physician using this method can do the most good to women afflicted with this ailment. In reality parametritis very seldom occurs alone, but is accompanied by, and in most cases is the consequence of, endometritis. These two conditions form the picture of pathologic anteflexion. Intrauterine manipulations ought, therefore, not be undertaken before the inflammation beside the uterus has been removed. In case of pathologic anteflexion and retrodeviation the uterus is fixed in the majority of cases by adhesions following the course of lymph- and blood-channels. These adhesions can be found to extend either along the ovarian, uterine, or obturator vessels, and in order to restore the mobility of the uterus and to relieve congestive dysmenorrhea, we have to subject these bands to massage and stretching, liberating thereby at the same time vessels and nerves from constricting, cicatricial tissue. The conscientious physician is not allowed to let the disease take its own course and to confine himself to the alleviation of symptoms as soon as we learn of methods that will lead us to an etiologic treatment of these troubles. In spite of the enthusiastic eulogies of some authors, we are fully convinced that mechanical disturbances can be cured only by mechanical therapeutic methods. A chemic remedial substance that removes shrinking bands and elongates shortenings does not exist, nor will it ever exist.

The most common type of retroflexio uteri is the one in which the cervix is fixed in front by a band running from the cervix toward the left, and anteriorly to the left obturator foramen, in which case the fundus lies posteriorly to the right of the promontorium. The fixation anteriorly is perceivable by the sense of touch, and if a Sims speculum is used in knee-chest position, is plainly noticeable to the eye.

Displacement of the cervix forward and downward, in rare cases also forward and upward, and displacement of the corpus uteri backward, cause retrodevia-

tion, however different the displacing forces may be. The duty of therapeutics, therefore, consists simply in removing those alterations in the pelvis which displace the cervix forward and the corpus backward. Every effectual treatment of retrodeviation has to begin with a replacement of the displaced organ. It is surprising that some physicians still practice instrumental replacement—a treatment that ought to be rejected by all physicians, as it is not only unscientific but even dangerous. Only in cases in which an excess of adipose tissue or an exceedingly large pelvis renders replacement difficult may we use instrumental replacement. Ziegenspeck devotes an entire chapter to the technic of manual replacement of the uterus and describes in a clear and complete manner the different methods of replacement for the various forms of displacements.

Posterior adhesions of the uterus are not the cause but the consequence of retrodeviations. In these fixed retroflexions, too, we must endeavor to replace the uterus as soon as possible, and as this can be accomplished only by severing the adhesions, the latter manipulation is the first step in our procedure, and is done by means of massage or by loosening them under anesthesia. People who abhor the surgeon's knife and generally dread an operation are easily persuaded to submit to such a treatment. Ziegenspeck claims never to have seen any harm accruing from this method of loosening. After loosening allow rest for some days; perhaps the use of an ice-bag may be valuable, and as soon as possible remove any parametritic bands—the real causes of retrodeviations—by means of massage and stretching. To avoid relapse the introduction of a pessary may be indicated. Generally speaking, in cases of fixed retrodeviation the prognosis as regards a permanent cure is a very good one, a majority of them finding permanent relief. But only after the removal of those *parametritic* fixations which gave rise to the retrodeviations does the uterus remain in normal position.

Under the head of "Competitive Methods for Treatment of Retrodeviation," Ziegenspeck describes the different operations suggested for retrodisplacement, together with other therapeutic methods generally used.

Although Thure Brandt himself claims that the curing of prolapse constitutes the weakest part of the whole of his therapeutic method, yet no case should be treated in another manner before Brandt's method has been given a trial, and as it is an unanimous sentiment of the most experienced gynecologists, corroborated by a large part of the cases examined by Professor Ziegenspeck with this particular object in view, that but few prolapses occur without inflammations being found in the adnexa, a permanent benefit is always secured even if the prolapse itself remains uncured. A selection of the most varied views concerning the genesis of prolapse precedes the description of symptoms, pathologic anatomy and treatment by Brandt's method, with a description of the different operations for the supposed cure of prolapse.

In regard to the indications for massage, we may state in general that in all those affections in which operative procedures lead *more quickly and without evil consequences* to a certain cure, these ought to be undertaken; furthermore, that any acute inflammatory condition and the existence of an infectious focus strongly contraindicate massage. As some of the special indications for pelvic massage, however, may be mentioned: old exudates, the sequelæ of pelvic cellulitis; chronic affections after perioöphoritis and oöphoritis, and displacements of the uterus. In chronic metritis and endometritis the results of pelvic massage are also very favorable. In the last-mentioned affection massage will, however, sometimes constitute the after-treatment of curettage. In subinvolutions of the uterus, undeveloped conditions of the pelvic organs, where, in the majority of cases we do not succeed with other means, excellent results have been achieved by massage. Tenderness of stumps after operations, or any tenderness in the pelvis will be effectually removed by this method.

684 W. North Avenue.

REPORT ON MASSAGE.

MASSAGE AMONG THE NAVAJO INDIANS—EFFECTS OF MASSAGE UPON THE SECRETION OF THE GLANDS —MASSAGE AND FARADISM AS ANALGESICS.

BY DOUGLAS GRAHAM, M.D.
BOSTON, MASS.

A method of curing the sick amongst the Navajo Indians of Arizona is given by James Stevenson in the "Ceremonial of Hasjelti Dailjis," in the eighth annual report of the Bureau of Ethnology, Washington, 1891, from which the following abstract is made. For a prehistoric, antediluvian performance in modern times it surpasses anything I have yet found:

During his visit to the southwest in the summer of 1885 it was Mr. Stevenson's good fortune to arrive at the Navajo Reservation a few days before the commencement of a Navajo healing ceremonial. The ceremony was to continue nine days and nights. The occasion drew to the place about 1200 Navajos, on an extensive plateau near Keane's Canyon, Arizona. A variety of interesting occurrences attended the great event, such as mythologic rites, gambling, horse and foot racing, general merriment, and curing the sick, the last being the prime cause of the gathering.

A man of distinction in the tribe was threatened with loss of vision from inflammation of the eyes, which was supposed to have arisen from his looking upon certain sacred masks with an irreligious heart. He was rich and had many wealthy relatives, so they "soaked it to him." A celebrated theurgist was solicited to interfere. He arrived Oct. 11, 1885.

A bright light burned in the lodge, and shortly after dark the invalid appeared and sat upon a blanket in front of a song-priest. Three men personated the gods, Hasjelti, Hostjoghon, Hostjobokon, and one the goddess, Hostjoboard. They left the lodge and put on their masks.

On the second day, after singing and chanting and pouring medicine from a gourd on heated stones, Hasjelti lifted the coverings from the entrance to the sweat-house, and the patient, having donned his breech-cloth, came out and sat on a blanket. Hasjelti then rubbed the invalid with the horn of a mountain sheep held in the left hand and in the right a piece of hide from between the horns of the sheep. The hide was held flatly against the palm of the hand, and in this way the god rubbed the breast of the invalid while he rubbed the back with the horn, occasionally alternating his hands. After this Hostjoghon put the invalid through the same "course of sprouts." The gods then gave him drink four times from the gourd containing medicine-water, composed of finely chopped herbs and water, from which they had first taken a draught themselves.

On the third day the same procedures, with variations, took place. This time Hasjelti began with the limbs, and as he rubbed down each limb he threw his arms toward the eastern sky and cried "Yo, Yo!" He also rubbed the head and body, holding the hands on opposite sides. After this the sick man again drank from the bowl of medicine-water.

On the fourth day, after the invalid had drunk of pine-needle water and been bathed with the same, Hasjelti manipulated the right leg with the sheep's horn and hide, rubbing the upper part of the leg with the right hand and the lower part with the left; then the sides of the leg in the same manner, each time giving a hoot. The arms, chest, face and head were similarly manipulated, and every time he changed the position of his hands he gave a shout.

On the eighth day the hands were placed to the soles of the feet, varied with hooting, then "the heart of the invalid was touched" with the palm of the right hand, the left being placed upon the back. The body was pressed in this way four times amid loud cries. After touching each figure of a sand-painting, the right hand was placed to the forehead of the invalid and the left hand to the back of his head and the head pressed this way on all sides.

Many other details are given, but quite enough has been said. Whether the invalid was killed or cured does not appear. At any rate his pocket must have been touched, seeing that he had to pay for all this racket, including the entertainment of the 1200 Navajos.

ACTION OF MASSAGE UPON THE SECRETION OF THE GLANDS.

We now turn from the weird, superstitious and grotesque to the sunny light of science. M. Carlo Colombo of Turin, before the Société de Biologie on Jan. 25, 1895, gives an abstract of experimental researches which he made in the laboratory of M. Francois-Frank at the College of France. These experiments were done upon dogs in order to find out the effect of massage—applied locally in the region of each gland or collection of glands—upon the secretion of gastric juice, of bile, of saliva, of urine, of semen, of tears and of sweat. He has collected directly the secretion from each organ studied: the gastric juice by means of a gastric fistula, the bile by a biliary fistula; the saliva, the urine, the sperm, the tears, by means of canulas introduced into the canals of Steno and Wharton, into the ureters, into the vasa deferentia and into the naso-lachrymal canals. The sweat was obtained from a man by means of a hot bath. He ascertained the quantity and the chemic composition of the secretion which was produced by each gland, or collection of glands, in a certain lapse of time *without massage*. *After massage* he made the same examination of these secretions which had flowed in the same length of time.

Gastric juice.—In consequence of massage, the quantity of liquid which flowed through a gastric fistula for two hours was more than double that which flowed in the same time without massage. A part of this was mucus, the remainder gastric juice. Massage for five minutes caused but little variation in the secretion; but continued for fifteen minutes, the maximum of secretion was produced. When the massage was prolonged beyond this time, the proportion of hydrochloric acid and pepsin did not increase any more, but the mucus became more abundant and the gastric juice was more diluted.

Bile.—The quantity and the chemic composition of the bile secreted during four hours did not vary appreciably after ten minutes of friction upon the hepatic region and of *pétrissage* or kneading of the lower border of the liver. But after ten minutes of *trepidation* (shaking or vibration) and of *tapotement* or percussion, the quantity of bile increased considerably in the next four hours. The cholesterin and the biliary soda salts were more abundant. After twenty-five minutes of friction and of *pétrissage* the same results were obtained as after ten minutes of *trepidation* and *tapotement*. The maximum result was obtained by combining ten minutes of *trepidation* and *tapotement* with ten minutes of friction and *pétrissage*.

Saliva.—The submaxillary glands were more sensitive to massage than the parotid—their secretion began to increase after five minutes of massage, and after ten minutes of massage the maximum secretion was obtained either in the submaxillary glands or the parotid. The saliva which flowed from the glands was similar to that which was obtained by exciting the chorda tympani; it was clear liquid, very watery and rich in alkaline chlorids.

Urine.—The quantity of urine secreted by the kidneys during four hours, the region of which had been submitted to massage for ten minutes, was increased. There was a diminution of the specific gravity, and at the bottom of the vessel there were abundant deposits of epithelial cells, and slight traces of albumin were found. The other constituents did not vary. Subsequent examinations showed that the albumin existed in the urine only during the five minutes after massage; later it was not found.

Sperm.—The testicle that had been *masséed* secreted during twenty-four hours almost double the quantity of semen that was secreted by the other testicle that had not been *masséed*. The sperm collected from the divided vas deferens was reduced to that of testicular juice. The quantity was small and showed an increase of water, of chlorid of sodium and of phosphate of spermatin. The spermatozoids were numerous and active.

Tears.—Massage applied to one of the lachrymal glands produced, by a reflex bilateral action, an equal increase of secretion of both glands. The liquid which was secreted during six hours in consequence of massage was of the same chemic composition as that secreted by excitation of the trigeminus, it was clear and watery, and the chlorid of sodium in it was considerably increased.

Sweat.—The perspiration collected after massage was more profuse than without massage, in the same length of time, twenty minutes. Its density was diminished; it showed a slight alkaline reaction and was relatively deficient in potassic salts, in urea and acids. It also presented a deposit of superabundant epithelial cells.

General Conclusions.—According to these results, viewed collectively, it would seem that we observe not only an increase of the specific elements of each secretion in a constant measure, but also a still more considerable increase of the water in which these elements are dissolved. We can therefore, it seems to us, infer that the massage acts by a double process—on one hand it accelerates the function of the glandular epithelium; on the other, and perhaps in a still greater measure, it determines in the organ a more abundant afflux of blood, which favors filtration.

MASSAGE AND FARADISM AS ANALGESICS IN THE LOOSENING OF JOINT ADHESIONS.

The *London Practitioner*, Vol. li, No. 2, and the *Revue d'Hygiene Thérapeutique*, May, 1895, have given the experience of Douglas Graham with massage and the faradic current in relief of pain caused by loosening adhesions about joints. It was in 1884 that he began using a strong faradic current for the immediate relief of pain caused by forcible stretching and loosening of adhesions, and he has continued to do so ever since, with, in almost every instance, more speedy relief than could be obtained in any other way. Partial relief is usually immediate, and complete relief soon follows—in from thirty to forty hours—so that the stretching and rupture of adhesions can be repeated several times at one sitting—a procedure to which patients willingly submit, knowing that the pain can be so quickly stopped. Massage accomplishes the same purpose, but in general not so quickly.

His plan in these cases is first to ascertain how much active motion the joint is capable of, then to find the limits of passive motion, after which he proceeds with massage, alternating with gradually increasing passive motion until the limits of the latter without breaking adhesions are reached. If these can be started without putting the patients under ether he does but little at a time; then having a faradic battery in action at hand he applies a strong current by two tolerably large electrodes, covered with sponge or absorbent cotton, to each side of the painful joint or to its anterior or posterior aspect, or wherever the current is most accessible to the seat of pain, and usually in from thirty to sixty seconds there is complete relief. Then he proceeds with massage, gentle pressure and passive and resistive motion for ten minutes or so, after which he increases the passive motion to the extent of tearing adhesions a little more, and follows this by the same means of relief. In this way patients have immediate use of all the motion thus gained, and for adhesions that are neither too deep nor too strong, it is preferable to breaking them under ether. Under anesthesia so much is likely to be done at one time that the joint is lame and sore and useless for weeks or months often; or what is more and worse, the adhesions may re-form stronger than before, unless massage and passive motion be early applied to prevent this, which is seldom done. Furthermore, this plan of massage and passive motion gradually increasing to the extent of loosening adhesions will quickly show whether these are so deep and strong or the involuntary tension of the muscles so great, that they can not be entirely overcome without putting the patient under anesthesia. In doing this time is not lost, for massage with passive and active or resistive movements is the very best means to use preparatory to breaking adhesions under ether; for they facilitate the motion of the joint and the relaxation of the muscles as far as the adhesions will allow.

Graham had supposed that this method of using the faradic current for the relief of pain caused by the breaking of adhesions was in common use, but inquiry and research have failed to reveal to him that the analgesic effect of the faradic current had been used by anyone else for this purpose. When adhesions are slight and yield easily to moderate force, massage alone will prove sufficiently palliative; but where they are moderately strong and stubborn the faradic current would seem to afford the quickest means of relief after stretching or tearing them; while for firm deep adhesions, with obstinate contraction, there is nothing but the forcible breaking of them under ether. In these last cases gentle massage alone has afforded immense relief as soon as ten hours afterward.

The use of massage, movements and faradism here outlined is particularly applicable to periarthritis of the shoulder joint, and troublesome cases of this kind can be worked out to a satisfactory termination. One case of this sort is referred to, where the faradic current was intensely disagreeable, but after an upward pull of the humerus so vigorous as to stretch or tear the adhesions, pain was speedily relieved by the immediate application of the current; and as soon as the pain had gone the disagreeable sensation of the current again became felt.

An excellent procedure in these cases and one which the author has never before heard of, is to tire out the stronger opposing muscles by means of resistive motion; as, for instance, in the case of the shoulder joint, the muscles that pull the humerus down, by making resistance at the elbow while the patient pulls this down. After a dozen or twenty-four pulls in this manner, the deltoid, which has long been weak from inactivity can often raise the humerus much higher, and thus shows much more clearly to what extent adhesions, if they exist, limit motion. This is taking advantage of the physiologic principle, that by increasing the contraction of muscles we at the same time increase their relaxation. A contracted muscle with a weight attached to it extends more than it does when relaxed with the same weight attached to it.

More recent experience proves to Graham that many of these cases get complete relief from the faradic current in from ten to twenty seconds after breaking adhesions. With practice and experience come skill. He has also tried the plan of attempting to stretch adhesions, shortened and indurated tissues while the faradic current is passing, and finds that it works well, lessening the pain considerably. In the case of the knee-joint, patients can apply the poles themselves.

(To be continued.)

THE PASSING OF ALCOHOL.

Read before the New York State Medical Association at the meeting held in New York City, Oct. 20, 1898.

BY JOHN M. FARRINGTON, M.D.

BINGHAMTON, N. Y.

In April, 1889, I presented a paper before the Medical Society of the County of Broome, this State, entitled "The Use of Alcohol in Medicine." This paper was published in the *New York Journal of Medicine*, Sept. 28, 1889. At that time I took the position that our text-books on materia medica and therapeutics needed revision, since their statements relative to the effects of alcohol upon the human system had been proven by modern research and observation to be erroneous.

In my article I made many quotations from our standard authors, a few of which I here repeat. "Alcohol is a useful food." "An important remedy in the various forms of pulmonary phthisis." (Bartholow.) "The early administration of the preparations containing alcohol furnishes our best means of counteracting the depressing action of disease in general." (Bidwell.) "Alcohol is the savings bank of the tissues.

He who eats little and drinks alcohol in moderation retains as much in his blood and tissues as he who eats more and drinks no alcohol." (Moleschott.) "In the form of wine or distilled spirits, alcohol is the universal and familiar remedy for debility of every kind." (National Dispensatory.) "In acute diseases associated with debility, alcohol is often an invaluable remedy. Taken along with food in small quantities it favors digestion by its local effect upon the stomach. (U. S. Dispensatory—latest edition.)

These represent but a few of the quotations I copied in the paper to which I have previously made reference, and they not only gave expression to the views of the writers at that time, and prior to that period, but were accepted and adopted by most of the members of our profession, and influenced their practice accordingly. Yet these views are no longer defensible, and while I had reason to feel that I stood practically alone among my local associates, when I read the paper referred to and expressed my opinion, formed from careful personal observation and experience in the use of alcohol as a medicinal agent, I am quite confident today that the class of physicians I then represented has so far increased, that now those of the profession who believe in the general use of alcohol as a remedy are in the minority. With the light which has been thrown upon this subject during the past few years, a physician subjects himself to adverse criticism, and has need to apologize for using alcohol in cases in which but a few years ago he would have been censured had he refrained from using it.

One of the most honored physicians of our time, N. S. Davis of Chicago, has said: "Step by step the progress of science has nullified every theory on which the physician administers alcohol. Every position taken has been disproved." Alcohol is not a food, and does not nourish but impairs nutrition. It is not a stimulant in the proper acceptation of that term; on the contrary, it is a depressant. Hence its former universal use in cases of shock was, to say the least, a grave mistake. It has been proved by recent experiments in the physiology of alcohol that "it retards, perverts and is destructive, either in large or small doses, to normal cell growth and development." (Hodge.) Alcohol has been dethroned from the exalted position it formerly held in therapeutics. The amount prescribed today relatively to population is perhaps not a tithe of what was used forty years ago when I entered upon the practice of medicine in this city of New York. And I am led to believe from published reports, which I have recently seen, that the administration of alcohol both in private and hospital practice is steadily and rapidly decreasing. Life insurance companies have become convinced, beyond question, that alcohol, used in moderate quantities, impairs the vital powers and shortens life. The companies require their solicitors to question candidates for insurance more closely than ever before in reference to their habit in the use of intoxicants, and they decline to accept a risk, or accept it only with qualifications on a party who habitually uses any form of spiritous or malt liquor. Railroad corporations have learned that even a moderate use of alcohol affects unfavorably the brain and muscular power, and therefore these companies require all engineers, conductors, brakemen and switchmen to be total abstainers. Religious societies who formerly made use of alcoholic wine in the celebration of the Lord's Supper have discovered that its use at the communion service has, in many instances, aroused the appetite for intoxicants in reformed persons and thus started them again on the declivity to ruin. Churches have likewise learned that the use of alcohol as a beverage is the greatest barrier to the progress of religious truth. Therefore a majority of the Christian societies have banished intoxicating wine from their communion rites and use only the unfermented juice of the grape. Public state ceremonies, such as the inauguration of the President of the United States and of the Governors of States, which were once scenes of bacchanalian revelry, have so far been modified in deference to public sentiment, that in many instances no kind of alcoholic beverages are furnished. Social gatherings and banquets, where formerly champagne and other mild intoxicants flowed freely and were considered essential, are now frequently conducted without any form of alcoholic drink.

It is our positive conviction, that notwithstanding the drinking usages of our times, there never has been a period in the history of the world when the use of alcoholic liquors, as a beverage, was as disreputable as it is today, and no man or woman can indulge in their habitual use and not suffer depreciation in business and social position.

The attention of the civilized world has been called to the conspicuous fact of the accuracy of the firing of the gunners on our battle-ships in the recent war with Spain. The contrast between the firing of the men of our navy and that of Spain was chiefly due, no doubt, to the custom that prevails on the ships of the latter where daily rations of grog are given at all times, and when an action is going on or anticipated, double rations of grog are furnished to the men, while since 1862, when that custom was abolished by our government, no rations of liquor are allowed at any time on board our ships. The custom just alluded to as followed by Spain is true of all the navies of the world but ours. Yet Great Britain has abandoned the double rations of grog when a fight is on and then no liquor is allowed, but in place of it supplies of water and oatmeal are arranged all over the ship to satisfy the thirst resulting from the heat, exertion, and smoke inseparable from a naval combat.

Perhaps the most notable evidence of the progress of enlightenment on this subject of the effects of alcohol on man has been given recently by the War Department of Great Britain.

I am indebted to the *New York Tribune* (Supplement May 20, 1898) for the following statements, which I have necessarly condensed when not quoting verbatim:

By order of Field-Marshal Lord Wolseley, British commander-in-chief, careful and exhaustive experiments were made with a view to ascertaining the relative effects of alcohol and of total abstinence upon the physical endurance and staying qualities of the troops. One regiment was deprived of every form of alcoholic drink, while another belonging to the same brigade, was allowed to purchase as usual malt liquor at the canteen, and another would receive a daily ration of whisky. In each instance the experiment showed that whereas at first the regiment which had received an allowance of grog, surpassed the others in dash, and in impetuosity of attack, yet that after the third or fourth day its members began to show notable signs of lassitude and a lack of spirit and endurance. The same manifestations, though in a minor and slower degree, were apparent in the regiment restricted to

malt liquors, whereas, the men who had been kept from every form of alcoholic drink increased in staying power, alertness and vigor every day. The results of these experiments led the British War Department to decide, not on the ground of principle, but solely for the sake of maintaining the power of endurance of the troops now engaged in the Soudan campaign, not to permit a single drop of alcohol in camp save for hospital use.

"Spirits, wine and malt liquors have been barred from the officers' mess table, as well as from the regimental canteen, and from generals in command down to the drummer boys and camp followers, liquid refreshments have been restricted to tea and oatmeal water."

When one remembers how devoted the Englishman is to his beer, and the Scotchman to his whisky, which are regarded, not as luxuries, but as actual necessaries of life, the boldness and likewise the difficulties of the innovation will be appreciated.

"But the scheme has fulfilled all expectations. Thanks to total abstinence, the men have been able to make forced marches of the most extraordinary character across the burning desert and under a blazing sun, the heat of whose rays can only be appreciated by those who have lived under the equator. The Soudan is famed for its deadly climate, which either kills or prematurely ages the majority of white folks who penetrate beyond its frontiers. Yet in spite of this, there has never been a campaign where there has been so little sickness, where so few men have been compelled to fall out, even on the longest marches, and where the troops have been got into such magnificent physical and moral training that they would actually cover thirty miles of sand with empty water-bottles, without slaking their thirst once from the beginning to the end of the march, at the close of which they would still find themselves sufficiently fresh and vigorous to win a hard-fought victory such as that at Atbara under Sir Herbert Kitchener."

In the line of progress Major-General Miles issued, July 2, his General Orders No. 87, in which he states that "in order that the army may perform its most difficult and laborious duties with the least practicable loss from sickness, the utmost care consistent with prompt and efficient service must be exercised by all, especially by officers. The history of other armies has demonstrated that in a hot climate, abstinence from the use of intoxicating drink is essential to continued health and efficiency."

The writer will always believe, from his personal observation, that one of the most important and best-planned battles of our Civil War was lost to the Union Army because of the fact that at a critical period of the engagement, the commanding General was incapacitated and unable to properly direct the movements of the troops, he being under the influence of intoxicating drink.

It has been my design in this paper to state, simply and briefly, some prominent facts and some of the results of the use of alcohol, rather than to enter into any elaborate or argumentative discussion of its nature. It is, alas, useless to disguise the fact that many noble members of our honored profession have been victims of the blighting influence of this agent. As our fathers in medicine and we in turn have been largely responsible for giving mankind great confidence in alcohol as a most valuable agent in the saving of life and the promotion of health, and thus have secured its almost universal use throughout the civilized world; since we have discovered the error into which we were led, and that we have been deluded most seriously in this matter, does it not become our imperative duty to arrest, so far as we may, the devastation it is causing, and decry its use as evil, only evil, and that continually.

In conclusion, permit me also to ask this question: Ought we not henceforth to be leaders in all proper measures to banish from use this baneful agent which so long deceived both our fathers and ourselves, and rejoice in the better light that has dawned upon us, as did the aspostle Paul? Should we not be as active, yes more active, in securing the passing of alcohol from the domain of medicine than our ancestors and we were in conscientiously placing it there?

OTITIS MEDIA PURULENTA CHRONICA.

CLEANSING THE EAR THEREIN.

BY CHEVALIER JACKSON, M.D.

PITTSBURG, PA.

Otologists the world over are agreed that perfect cleansing is the first essential in all cases of otitis media purulenta chronica. This cleansing is often no easy matter if thoroughness is the aim. In those cases characterized by epithelial proliferation, cheesy pus, and detritus impacted in the deeper parts, the work of cleansing is difficult and the result imperfect. Yet the success of any form of treatment, and sometimes the very life of the patient depend upon the clearing out thoroughly of this mass that produces pressure or blocks the exit of pus. The foregoing is my apology for the following description of a method of cleansing that has yielded me good results:

First, cleanse as thoroughly as possible with a Harrison Allen cotton-carrier, armed with a mop of cotton. Then apply hydrogen peroxid with a mop of cotton and wipe out as thoroughly as possible. Next, syringe with a warm solution of hydrogen peroxid, followed by warm sterile water. Finally, dry out thoroughly, and, if there still remains any accumulation, insufflate a finely-powdered digestive preparation of carica papaya. This routine is to be repeated daily until the ear is thoroughly clean.

Such is the method in brief, but here, as elsewhere, efficiency depends upon careful attention to detail. The instrumental cleansing with the cotton mop can be done most efficiently with the Harrison Allen cotton-carrier, varying the amount of cotton from a mere covering of the metal to act as a probe in dislodging solid masses, to a larger fluffy tuft to absorb fluid.[1]

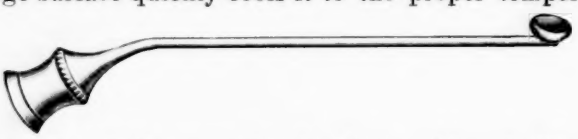
The value of hydrogen peroxid has been doubted by some. One writer of an excellent text-book states that beyond being visible in action he can see no advantage over other antiseptics. Its advantage, however, does not lie so much in its antiseptic power as in its leavening action on pus, which not only gives it greater penetrative power, but by lessening stringiness and ropiness, facilitates the removal of the pus by the mop and syringe.

The syringing must be done properly. The usual way is by some form of large thick-nozzled affair, whose total claims to merit are that it holds an unnecessarily large quantity of water and that the nozzle is too large to enter the meatus, where it might do harm (?) Such at least was the writer's syringing outfit until taught a better method at the clinic of

[1] Harrison Allen Cotton-Carrier in Otology and Rhinology: B. Alexander Randall in Philadelphia Medical Journal, Feb. 19, 1898.

Dr. Randall of Philadelphia. The instrument used there is the one usually sold in shops under the name of "Pocket Aspirator" or "Veterinary Hypodermatic," two-dram size. The canula serves excellently for syringing of the meatus and general fundus, and, being slender, enables the aurist to see exactly what he is doing, thus insuring a proper directing of the stream. Being introduced far into the meatus, the stream is not interfered with by the return flow. The longer needle, after blunting the point, serves as an intratympanic syringe by bending it abruptly at its tip so that the stream may be directed to the attic or toward the antrum. Any aurist who will try this method of syringing will never willingly waste his time with any cumbrous, inefficient substitute.

Another important point gleaned is the temperature of the water, which should not be less than 105 F., which is almost as hot as the hand can bear. This is not only for cleansing but for therapeutic effect. Sterile water should, of course, be used for all ear syringing. In the writer's office is a nickel-plated copper tea-kettle, coated inside with block tin, such as is sold at all kitchen hardware shops. A small bunsen gas-burner keeps the water in this kettle boiling all day with steam constantly escaping from the spout. This stream of steam will sterilize the blades of cutting instruments, snares, Bowman's probes, etc., at the moment of use, or the instruments may be put in a dish and scalded. When an ear is to be syringed, a half pint or so of the water is poured into a china finger bowl where the evaporation from a relatively large surface quickly cools it to the proper tempera-



ture without the necessity of adding cold unsterilized water to it.

To remove what neither dry cleansing nor syringing alone will bring away has been accomplished very efficiently in the writer's experience with a digestive powder of carica papaya, the South American digesting melon. Of this there are a number of preparations on the market, some of them trade-marked, some not. All seem about equal in efficiency, the chief requisite being a finely-powdered condition. It will "digest" the pus, mucus, detritus, cholesteatomatous formation, and to some extent break it down so that these come away more readily on the following day. It seems quite efficient not only in the atrium but in the more inaccessible parts, the attic, auditus, and possibly in some cases, the antrum, if the powder is properly applied. These applications in the direction of the antrum are to be made with an intratympanic insufflator, which is simply a small bell-mouth canula attached to the syringe above described or to the middle-ear pipette, or to the ordinary intratympanic syringe. The bell-mouth or cup is made at almost a right angle with the axis of the canula, and the canula is bent at the usual angle with the barrel of the syringe, or it may be parallel for those accustomed to working in the ear with straight-shanked instruments. From the cut, which is actual size, any instrument maker can make one to fit such syringe as the aurist may have.

The glass or metal middle-ear pipette may also be made to serve by flaring out a little cup or bell-mouth to hold a mass of powder as large as a No. 8 shot. Possibly the especially deft can get along without a special instrument, but this intratympanic insufflator has served well for applying other powdered remedies. Even if the membrana tympani, malleus, and incus be totally absent, there is little hope of getting any useful quantity of the digestive powder beyond the atrium with the ordinary insufflator, because the air compresses into a cushion in all the nooks and corners, and the return current carries the powder out again.

Small compressed masses of the powder may be worked into place with the small curette and probe. Of course, as with all powders applied to the ear, it is unwise to blow in a great mass that will plug up the channel for the escape of pus, though more of the digestive powder is necessary than is the case with boric acid, iodoform, etc. A warm, freshly-made solution of the ferment was injected with the intratympanic syringe with fair results in cases where the aperture in the drum membrane was small. Of course, the care necessary in any intratympanic injections must be observed in cases with defective outlet for the injected fluid. Doubtless such cases would fare better in any event if operative measures were used to establish a free egress for pus and a free ingress for cleansing and remedial solutions and powders.

The digestive powder of carica papaya has little solvent action on a ceruminous plug, but the writer has not felt the need of a solvent for this condition since learning, as before mentioned, how to syringe the ear. With the syringe and method spoken of with canula nozzle in view and properly directed, the most stubborn ceruminous plug may be brought away with three ounces of water in three minutes, and usually fewer ounces and minutes are sufficient.

It is hoped that what has been written here will not be looked upon as advocating the use of carica papaya for the cure of otitis media purulenta chronica. It is merely for cleansing, not for therapeusis, that it is recommended, though my cases of this trouble get well in less time now than they did before using it. So far as known to the writer it has not been used for this purpose before, and was hit upon by him in the search for a harmless solvent for inspissated pus and cholesteatomatous formation. It has served the purpose better than anything else tried. It does not act on living tissues, neither the healthy nor the granulation tissue, but it assists materially in removing cheesy and foul pus, which is a factor in producing caries in cases not already carious, and which is the irritating stimulus producing granulations. To the skeptic it is suggested to take a test-tube containing a dram or two of pus and add thereto a scruple of any good digestive preparation of carica papaya melon, cork it up, and carry it in his waistcoat pocket for twenty-four hours. He will find the physical condition of the pus changed, and it will be much easier to wash out than it would have been when he put it in. Neither pepsin nor pancreatin, nor any of the chemic solvents tried yielded results worth considering.

Balsam of Peru in Scabies.—M. Descouleurs, St. Lazare Hospital (*Med. Press and Cir.*; *Medical Age*), after the methods of Petters, Nothnagel and Rossbach, treats itch with frictions of balsam Peru. He does not think the preliminary soap bath necessary. There exists no counter-indication to its employment, not only on account of its simplicity but also for its agreeable odor.

ACUTE GONORRHEAL MENINGITIS.

REPORT OF A CASE.

BY JOE S. WOOTEN, B.Sc., M.D.

MEMBER OF THE AMERICAN MEDICAL ASSOCIATION, TEXAS MEDICAL ASSOCIATION, AND FELLOW OF THE TEXAS ACADEMY OF SCIENCE.

AUSTIN, TEXAS.

In Taylor's "Venereal Diseases" we find brief references made to gonorrheal affections of the spinal cord (cap. xxvi). Citations are here made to two cases reported by Hamen and Parmentier, in which "spinal symptoms supervened upon gonorrheal rheumatism"; by Tixier and Stanley, respectively, of paraplegia resulting from similar infection; to a case reported by Panas of a "man in the declining stage of gonorrhea who, after exposure to cold, had a severe headache lasting for ten days, and the loss of the sight of one eye"—from optic neuritis; and finally, to the study made of the various published cases by Dufour, which shows the most common clinical picture to be one of dorsomyelitis, with the course of the disease similar to all infectious myelites, and termination in death in one-third of all cases. In the light of such facts, these authorities are of one opinion, that gonorrhea *may cause* myelitis and meningomyelitis like other infectious diseases. But aside from these few references, medical literature—so far as my researches extend—is silent upon the subject, and Taylor concludes his chapter with this statement, that "we have no knowledge of the involvement of the cerebral meninges by the gonorrheal process." In the report of the case to follow, no autopsy was allowed, but the clinical picture was so striking that error in diagnosis would seem impossible.

Case 1.—A man, aged 36 years, weight 175, in perfect health up to the day of his recent illness. Temperate in all his habits, with family and individual history negative as to tuberculosis, syphilis, nephritis or trauma. Five days after exposure to gonorrheal infection, he experienced a burning and itching in the urethra, the meatus became red and swollen, a discharge appeared, and the case developed into a typic, acute, anterior gonorrheal urethritis. Social conditions deterred him from consulting a physician. Local injections were resorted to and in a few days an acute gonocystitis was the result. It was not until now that he sought the advice of a physician. When first seen, the tongue was heavily coated; the bowels constipated; there was considerable fever. He reported having had two chills the evening and night before with rigors, coming on several hours apart. He now complained of excruciating pain; backache, headache, pain over region of bladder, perineum and down the thighs; there was a profuse, purulent urethral discharge, and the two-glass test gave in addition blood in both. The patient was ordered to bed and all local treatment prohibited. Hydragogue-cathartics, hot sitz baths and mild alkaline diuretics were prescribed. The following day, another chill having appeared, quinin was administered in 5-grain doses every three and one-half hours, three doses a day for three days. On or after the sixth day, the fever subsided, the bladder and urethral symptoms improved, though the discharge was still profuse, and the patient was beginning to sit up. Directions were given to remain quiet, to keep the bowels open, to continue with the hot sitz-baths, the alkaline diuretic, and to drink freely of water, and that so soon as the acute symptoms subsided, irrigations and local treatment would be commenced.

Three days elapsed before the patient was again seen, and on being called, I found that the patient had been seized during the night with a rigor and chill; the temperature was then 103, the skin bathed in perspiration, the pulse full, quick and bounding. The condition of patient's mind had alarmed his wife; he was very hilarious, excited and talked at random, though when spoken to was fairly rational and gave satisfactory answers to most questions, but could give no explanation for his happy frame of mind. He complained of headache, vertigo and intense nausea—vomiting even water; the bowels were acting freely from the laxatives given, but owing to sick stomach no other medicines had been given during the past thirty-six hours. The urine was scanty, high-colored, mucopurulent and still discolored by blood, and micturition was extremely painful. In spite of all sedatives, the restlessness increased. No opiates were given, owing to the already existing inactivity of the kidneys. This restlessness and hilarity increased to a condition of acute mania, the patient grew violent, and restraint became necessary. This extreme condition lasted for about three days, when the patient gradually became less obstreperous, and violent only when disturbed or aroused. During this period of marked excitement the temperature ranged from 99.5 to 101; the pulse was full, tense, and the rate ranged from 78 to 84. The face was congested, the pupils tended toward dilatation rather than contraction, and reacted but slowly to light; the reflexes were exaggerated, there was marked tremor, the skin was hyperesthetic, there was beginning trismus and commencing rigidity of the neck muscles, and the patient evidently suffered great pain. The mental disturbance, however, was, up to this time, the most significant and marked peculiarity; though apparently wide awake, it required at times considerable effort to arouse patient to his sensibilities, and when touched or loudly spoken to, he would jump as though frightened. Near the end of this period of excitement, *gonorrheal arthritis* developed in left elbow and right knee-joint; the trismus became marked, the head drawn back, the eyes rolled in and up, and marked deafness supervened; there were hiccoughs and muttering delirium, and the patient gradually passed from this condition of sopor, which lasted about ten days, into coma and death. Early in the disease the urine and feces were voided in bed. So soon as cerebral excitement was observed, on my second visit to the patient, urethral and bladder irrigations with a quart of hot Thiersch's solution were practiced once a day and kept up until quite near the end. Under these washings, the secretion of urine became more free, and the urine itself much less purulent. Owing to the violence and strength of the patient and the aversion—from the very beginning—to all medicines, water or food, the administration of all nourishment necessitated the use of chloroform and the naso-esophageal tube. In this manner he was fed twice a day, and at one of the feedings, advantage was taken of the anesthetized condition to give local bladder and urethral treatment. At no time did the fever run over 103, and during the greater part of the disease, morning remissions were 99, with evening exacerbations of 100; there were no sweats. During the last twelve hours the pulse became more rapid and soft, the temperature rose and remained at about 102 until death. Rational treatment had little or no effect upon the course of the disease. The duration of the meningitis was about twenty-one days.

107-109 E. Tenth Street.

NEW METHOD OF NEPHRORRHAPHY.

BY J. F. BALDWIN, M.D.

PROFESSOR OF OPERATIVE GYNECOLOGY, OHIO MEDICAL UNIVERSITY; GYNECOLOGIST TO PROTESTANT HOSPITAL, ETC.

COLUMBUS, OHIO.

The following modification of the method of Dr. George Ben Johnson I have been using for some time, and think it is a decided improvement over any other method of anchoring the kidney with which I am acquainted.

The usual incision being made in the loin, the kidney is forced into position by the hand of an assistant and stripped of its posterior investment of fat, so as to expose the true capsule. This is incised longitudinally, care being taken not to wound the substance of the kidney. The edges of the incised capsule being caught with the forceps, the capsule is separated from the kidney with the finger, so as to give a flap on each side from two to two and one-half inches in length and about three-fourths of an inch wide. The flaps are cut or torn with the finger at each end, so that they can be brought out at right angles to the substance of the kidney. With a pair of scissors an incision is then made through the fascia and muscular tissue on each side of the original incision, parallel with it and about half an inch away, and of nearly the same length. A pair of forceps is passed through each of these incisions, and the corresponding flap of kidney capsule drawn through. Each flap is now

apposed on each side by muscular tissue, and is fastened in its new position by three or four straight catgut stitches. The two columns of muscular tissue which now lie together on each side of the original incision are in contact with the naked kidney, while the capsule upon each side is firmly held by the sutures. The incision through the superficial parts is now closed in the usual way and without draining.

While less than a year has elapsed since my first operation by this method, so that the test of time can not be adduced, the technic seems so reasonable and satisfactory that I can scarcely imagine any giving way of the parts after adhesions have once formed.

SOCIETY PROCEEDINGS.

Chicago Society of Internal Medicine.

Regular Meeting, Dec. 22, 1898.

(Concluded from page 128).

Dr. ROBERT H. BABCOCK presented a report to the meeting of

A CASE OF HEART DISEASE WITH INSTRUCTIVE LESSONS WHICH IT TAUGHT.

A. D., male, aged 12 years, was seen by me in consultation Oct. 20, 1894. There was history of typhoid fever two years before, succeeded by acute articular rheumatism and endocarditis. In the spring of 1894 he had one day taken an unusually long ride on his bicycle, after which symptoms of failing compensation appeared. During the summer he had been in Germany and received hydropathic treatment with benefit, but during the return voyage had contracted a severe bronchitis, which completely broke down whatever compensation had been gained. Ten days before my visit edema had appeared and rapidly increased. An eminent consultant had given an unfavorable prognosis and ordered small doses of tincture of digitalis and nux vomica.

The patient was found in bed and his condition was, briefly, as follows: moderate anasarca; great abdominal distension from tympanites and ascites; signs of fluid, probably transudate, in the right pleural cavity as high as the inferior angle of scapula; hepatic engorgement, the lower border of the organ reaching the level of the umbilicus. The heart was greatly dilated and somewhat displaced to the left, its apex being in the sixth left intercostal space near the anterior axillary line. Superficial dulness extended transversely from a little to the right of the right sternal border to the left anterior axillary line, and from the second left costal cartilage to the liver dulness below. The pulmonic second sound was greatly accented and reduplicated, aortic second, feeble, and in the mitral area the first sound was replaced by a loud, harsh, systolic murmur that was transmitted to the back. There was also a diastolic murmur following the second sound but not running into the next ensuing first sound. Venous stasis was also shown by cyanosis and the distended right external jugular; but the vessel did not pulsate. The pulse was from 114 to 120, regular, small, very compressible and extremely dicrotic, as shown by the pulse tracing. The case was plainly one of mitral insufficiency in the stage of destroyed compensation. The urine was reported negative, but a subsequent examination (Dec. 29) disclosed albumin, granular casts and 1 per cent. of urea.

Notwithstanding the unpromising condition, some hope of improvement was held out and the patient was put on diuretin (Knoll) and saline purgatives. An eighth of a grain of morphin with a two-hundredth grain of atropin was given hypodermically to induce sleep. The diet was restricted to milk. November 1, two days later, a note records that edema had disappeared from the legs, ascites was less, the jugular no longer distended, the pulse fuller and stronger, and the right ventricle less dilated. The frequency and vigor of the purgation was now reduced and diuretin discontinued. During the next week convallamarin, digitalis and strophanthus were successively tried, but, according to a note made November 9, failed to improve the circulation. Tuesday evening, November 7, patient had a fainting spell, which was twice repeated the following evening. On my arrival in response to a hasty summons the patient's condition was very critical. The pulse was not very rapid, being about 110 to 112, but was extremely weak and small, and irregular in force. Cardiac pulsation was palpable in the third, fourth and fifth intercostal spaces immediately to the right of the sternum, and over this area there was a distinct gallop rhythm, while a soft systolic whiff was audible in the tricuspid area which, together with the pulsating right external jugular, plainly indicated that the tricuspid valves were leaking. The liver was still more greatly enlarged. Digitalis was promptly ordered stopped, for it was evident that the ventricle was pumping blood through the stretched and defectively closed mitral opening back into the left auricle, greatly in excess of the amount it was able to discharge into the aortic system. Under this increased strain the right ventricle had become dangerously over-distended. The problem confronting us was how to restore, in part at least, the lost equilibrium between the arterial and venous systems. It was decided to sustain the myocardium by hypodermic injections of nitrate of strychnia, one-thirtieth of a grain every four hours. The engorged portal and systemic veins were to be unloaded by vigorous hydragogue cathartics and a return to diuretin (Knoll) without digitalis. While thus depleting the veins the arterioles were to be opened by nitroglycerin 1 to 100 every four hours, so as to bleed the patient into his own vessels, as it were. Absolute physical rest was insisted upon. This line of treatment proved so successful that on the morning of November 9 it was noted that "this morning the liver is smaller, external jugular collapsed, pulse fuller and 92. November 13, it is again recorded: pulse 86, fuller and not dicrotic, right ventricle decidedly smaller and heart's action regular, liver two inches below ribs, urine forty-two ounces in twenty-four hours, condition markedly improved." November 26, one dram of infusion of digitalis (t.i.d.) was added to the diuretin, 60 grains of which were given per diem. November 30 the urine had risen to 112 ounces in twenty-four hours, but the pulse was from 120 to 125, and so small that the digitalis was again discontinued. In the next few days convallamarin was administered in increasing doses, and under its effect the pulse grew fuller and stronger, but no less rapid. About this time the patient developed an obstinate and frequent cough, which again so threatened to overtax the feeble right ventricle that morphin was administered by hypodermatic. Examination of the lungs revealed slight but distinct dulness in the left infraclavicular region above and to the left of the heart. There were in addition broncho-vesicular breathing and copious fine moist râles throughout the impaired area. There was no fever and no pain was complained of. Consequently the condition could not be inflammatory, as pneumonia or tuberculosis. Nevertheless the unilateral distribution of the physical signs rendered me uneasy. Pondering over the possibilities, I was led by a process of exclusion to believe the condition due to pressure of the greatly enlarged left auricle upon that portion of the left lung, by which it was crowded upward and backward, its expansion hindered and bronchial secretions retained. Accordingly the patient was taken from the supine and placed in the semi-recumbent position, so as to allow the heart to fall away from the lungs, so to speak. The result confirmed the correctness of the opinion, for expectoration increased, cough diminished and resonance returned to that portion of the lung.

The patient's condition henceforth improved slowly but progressively, and before Christmas he was up and around his room, although the heart had not diminished in size nor the liver lost much of its engorgement. His abdomen was distended out of all proportion to his emaciated thorax with its stooping shoulders, flattened infraclavicular regions and prominent precordium. Respirations were extremely shallow and he crept about like a little old man. He was taking small doses of digitalis reinforced by adonis vernalis and, t.i.d., received a hypodermic of a $\frac{1}{60}$ of strychnin. His appetite was good, but digestion defective, and as his urine was of poor quality, his dietary was selected with great care. Symptoms of indigestion were met as they arose. He seemed to have reached a standstill; no amount of catharsis seemed to affect the liver further than to keep it from growing larger, and I realized that if he were to make more progress the chest would have to be expanded to give room for the enlarged heart, while the stasis in the portal system would have to be overcome by some means or other. It was decided, therefore, to have him inhale oxygen for the double purpose of improving hematosis and increasing the depth and force of inspiration. He was also made to go through the system of light exercises against resistance offered by the nurse, after the plan introduced by Schott of Germany. The results were surprising. A month later the notes record that the abdomen had begun to assume quite a natural appearance, and the lower hepatic border had retracted from the level of the umbilicus to but little more than an inch below the lower costal arch. The apex-beat was in the sixth intercostal space a quarter of an inch outside of the nipple line, while the superficial dulness reached scarcely to the right border of the sternum, and deep-seated dulness to but an inch to the right of that bone. The chest had filled out, and although the precor-

dium was still too prominent, there was no longer such a marked contrast between it and the corresponding region on the right side. The medication consisted of small daily doses of the usual heart tonics, digitalis, adonis vernalis and nitrate of strychnia.

From this time forward until the middle of April the boy's improvement was steady and highly encouraging. Indeed, he was able to make weekly visits on me in my office. Suddenly he developed an acute follicular tonsillitis, so characteristic in the appearance of the throat and the attendant symptoms that, although cultures were not made, the diagnosis was clear and easy. To protect myself, however, against the possibility of error, I had the throat examined by Dr. T. Melville Hardie, who declared there could be no thought of diphtheria. Appropriate treatment speedily allayed the throat manifestations; not so, however, with the fever, which continued of moderate severity and irregular type. And the patient's condition grew steadily but slowly worse. To make a long story short, the infection from the throat led to an acute endocarditis engrafted on the chronic valvulitis already existing, as shown by the change in the apex murmur. Parke, Davis & Co.'s solution of yeast nuclein was administered per rectum in daily doses of 80 minims, in the hope of thereby combating the infection. Whether or not this was the case, the temperature subsided to normal after about three weeks. Anorexia was so pronounced that the boy was sustained by large doses of somatose in beer, for which beverage he expressed a decided craving. Notwithstanding the subsidence of constitutional symptoms the heart grew steadily worse, and stasis in the portal system again began to assume alarming proportions. It looked as if the end would come through gradual cardiac asthenia. Suddenly, however, on the morning of May 22, after the patient had voided urine, he sank back on the pillow gasping for breath. When I reached his bedside an hour or two later it was evident that the end was near, the pulse being irregular, feeble and but moderately accelerated. Respirations were labored and consciousness was imperfectly retained, and he died about four hours after this last attack of cardiac failure.

These lessons are to be drawn from the case:

1. It was brought out in the history that the patient's symptoms really dated from a bicycle ride in the spring of 1894. It is needless to emphasize the importance to individuals desiring to ride the wheel, of an examination of the heart to determine whether or not such exercise be safe. But it may be well to call attention to the fact that children with grave cardiac lesions are peculiarly tolerant of conditions which in an adult would give rise to pronounced symptoms. The family physician, therefore, should decide the question of permitting a child to ride a wheel, and should guard himself against being deceived by the child's statements that the exercise does not produce shortness of breath or palpitation of the heart.

2. The second lesson taught by this case pertains to the administration of digitalis. It is in mitral disease that this remedy exerts its most benign effects by enabling the left ventricle to discharge a greater volume of blood with each systole into the aortic system, and thus deplete the surcharged pulmonic vessels. Yet in this patient, digitalis, although cautiously given, repeatedly aggravated the condition and once brought about dangerous dilatation of the right ventricle. Why was this? Did its constricting effect on the arterioles interfere with the free discharge of the ventricle's contents, and thereby intensify the regurgitation? Or was it because, as stated by Huchard, the overdistension of the cardiac cavities nullified the usual influence of the drug upon the muscle-fibers of the heart? Or was it to be explained on the theory advanced by Openchowsky? This experimenter came to the conclusion that digitalis affects chiefly or wholly the left ventricle, and only indirectly the right, by aspirating the blood, as it were, out of the lungs and thus lessening the labor of this latter ventricle. The wall of the right ventricle is so much thinner than that of the left that there is less muscle fiber to be affected by digitalis, and when it is once damaged in its integrity, it is much less able to establish compensatory hypertrophy. It yields more readily to dilating influences, and I am inclined to the opinion that in this instance the injurious effect of digitalis was owing to its unequal influence on the two ventricles, aided by the great patency of the mitral orifice. The left ventricle was made to contract with disproportionately greater vigor than did the right. Regurgitation was increased, tension within the pulmonary vessels was augmented and proved too much for the thin-walled right ventricle, which had to dilate still further.

3. The third point of particular interest was the compression of the left lung by the enlarged heart. As already stated this produced physical signs which might readily have been mistaken for those of a serious pulmonary affection had it not been for the absence of pyrexia. One lesson, at least, which it teaches, is the necessity of chest development in these little sufferers that compensatory hypertrophy of the heart may be secured without seriously encroaching upon the respiratory capacity of the left lung. This must be accomplished by means of appropriate respiratory gymnastics under the supervision of a skilled trainer. I can recall more than one instance in which nature's attempt in this direction was shown by disproportionate enlargement of the left half of the thorax and scoliosis. Some of these patients were treated for spinal curvature by means of suitable orthopedic appliances, which, though they corrected the deformity, materially hampered the already overburdened heart. Which, I ask you, is the more important, a straight spinal column or compensatory cardiac hypertrophy?

4. This taught me that efforts directed toward chest expansion and gymnastic exercises made against resistance according to Schott's method were an efficient means of overcoming chronic hepatic engorgement. As previously stated, the engorgement of the liver persisted, in spite of severe and frequent purgation, the enlarged organ extending below the level of the umbilicus and causing great abdominal distension. After the boy had practiced deep breathing and performed the light gymnastic exercises for four weeks the appearance of the abdomen became noticeably changed for the better, while palpation of the liver disclosed an appreciable reduction in size and firmness. A few weeks subsequently the organ reached scarcely a finger's breadth below the costal arch. That this was due to the thoracic movements I was convinced at the time, while a similar experience in a second case, a year later, so satisfied me of the efficiency of this plan of treatment that I now regard it as second to no other means, in appropriate cases, for the reduction of hepatic engorgement. The rationale of its action is simple. Two great factors in the maintenance of venous circulation are respiratory and muscular movements. It is very common to observe cardiac sufferers sitting all day long in an easy chair, shoulders bent forward, chest retracted, the abdominal viscera crowded up against the diaphragm and scarcely a perceptible movement of the chest in respiration. This very attitude favors astasia within the portal system. If now the patient be made to stand erect and expand his thorax in forced inspiration several times a day, the effect is to aspirate blood out of the venæ cava into the right heart, and if the right ventricle be adequate, the hindrance at the mitral orifice not too great, a better filling of the left ventricle and ampler discharge into the aortic system must result. In a case of great mitral stenosis it is possible for the blood to be sent into the right ventricle more rapidly than this chamber could forward it through the lungs past the point of constriction; but in mitral insufficiency no such theoretic objection holds, and I can only repeat that as a matter of fact in this and one other case of predominating mitral regurgitation these exercises produced results to me truly astonishing. It is but an attempt to voluntarily augment what physiologically obtains—an increased force and fulness of the pulse during inspiration, and consequently the patient must not hold his breath at the end of inspiration, but let expiration follow promptly and easily. Moreover, the attendant who applies resistance to the extension, flexion and rotation movements of the patient's extremities and trunk must be skilled to detect the first evidences of dyspnea or cardiac embarrassment and instantly bring the movements to a stop. Without such care these exercises may be as powerful a means for harm as they are for good when properly performed.

It might be remarked, incidentally, in connection with such physical training, that the patient's clothing should be carefully adjusted or revised so as to avoid constriction of either chest or abdomen. Unduly tight corsets or skirt bands belting in the waist may nullify all attempts to overcome visceral engorgement.

The last point to which I desire to direct attention is the attack of follicular tonsillitis and its influence upon the subsequent history of the case. Although there was no postmortem examination to substantiate the existence of a fresh endocarditis, there was but small room for doubt of the correctness of the diagnosis. Not only was general infection shown by the low fever persisting for several weeks, but a gradual change took place in the character and rhythm of the cardiac murmur. Whereas, this had previously been purely systolic, it now took on a rougher timbre in its first portion, which, on being closely compared with the apex impulse, was found to be presystolic. *Pari passu*, with the development of this auriculo-systolic murmur, pulmonary congestion became increased, as shown by greater respiratory embarrassment and more apparent dilatation of the right ventricle and engorgement of the liver. Numerous observations have established the microbic nature

of follicular tonsillitis, both acute and chronic. The micro-organisms most often present are streptococci and staphylococci, which may reach the tonsils by way of blood and lymph-channels from the nares or elsewhere.

In chronic vegetative endocarditis conditions are present always favorable to a lighting up of fresh inflammation upon the occurrence of any general infection. Therefore, given a chronic valvulitis, a tonsillitis lacunaris acuta and a systemic infection by the way of the cervical lymph-glands, we have all the conditions necessary to the development of a fresh endocarditis. In the present instance the channel of infection was evidently the cervical lymphatics, which, upon the occurrence of the tonsillitis, became indurated, enlarged and tender, and never again resumed their former size. Vaughn's yeast nuclein, as prepared by Parke, Davis & Co., was administered per rectum in a daily dosage of eighty minims. Sulphate of strychnia in full doses by the mouth, as the patient's excessive hyperesthesia prevented its hypodermic administration, was relied on as the cardiac tonic. Laxatives were exhibited cautiously, and the diet was as nourishing as possible, but much of the time it consisted almost exclusively of somatose in a glass of beer, for which the boy manifested a decided craving. Whether or not the systemic infection was favorably influenced by the nuclein, the fever gradually subsided, disappearing altogether a fortnight or more before death. The immmediate cause of the fatal termination was not quite clear, but seemed due to gradual cardiac asystole in consequence of failure of the right ventricle. In conclusion, it may be stated as a general proposition, that if any acute infection, no matter how mild apparently, arise in the course of chronic valvular disease, it may unfavorably affect the whole subsequent history of the case, and no matter how trivial the ailment may appear to the patient or his friends, it should at once be made a subject for the family practitioner's most careful attention.

DISCUSSION.

Dr. N. S. DAVIS, Jr.—There are several points in Dr. Babcock's paper that are extremely interesting. First, in regard to the effect of bicycle riding upon the heart. Unquestionably it is possible to cause dilatation of the heart by excessive bicycle riding, even when it is not weakened or modified by a chronic valvular lesion. Riding too far, or too fast, may cause it. I have seen several examples of such dilatation. It is rare, indeed, that such dilatation occurs in those who have valvular lesions which are well compensated for, or in those who have not valvular lesious, provided the distance ridden is moderate and the rate of speed is a moderate one. I have seen a weak heart strengthened by bicycle riding, and a healthy one dilated by it. I recall the case of a young lady who was confined to her bed for a number of weeks by acute dilatation of the heart, brought on by excessive bicycle riding, combined with some other causes. She did not have a chronic valvular lesion of the heart. Her heart up to that time was sound and strong. She had had when a child an empyema upon the left side, after which only partial re-expansion of the lung took place. A mild degree of shortness of breath had always existed and prevented her from taking part in active sports during the period of growth. She was at a house-party in the country; took an excessively long bicycle ride which necessitated hill-climbing. While riding, she suddenly experienced a moderate degree of dyspnea and felt faint. This feeling subsided in a few moments, while she rested. However, she again took her wheel, rode some distance farther slowly and carefully, and returned to the city by rail. She went immediately to a distant part of the city to another social gathering, hurried to catch a train, running part of the distance; she felt very tired when she retired at night, and the next morning, on trying to rise, she found that she was extremely dyspneic on slight exertion and that her heart beat with great rapidity. She felt faint and confused whenever she arose from a recumbent posture. Physical examination showed dilatation of the heart, particularly of the left ventricle. A systolic murmur had also developed. It was heard clearest at the apex. This murmur persisted for several weeks; and the palpitation for several months. At first the heart was very irregular as well as fast. I relate this case as one in which evidently bicycle riding, combined with lessened nerve and muscular tone, resulting from the excitement and mild dissipation incident to a house-party, overexertion immediately following the bicycle ride, brought about cardiac dilatation.

I recall another case, one of chronic valvular lesion of the heart in which there was imperfect compensation, no edema, no passive congestion of any of the viscera demonstrable, but the heart beat rapidly and irregularly and was moderately dilated. The patient had been under observation for many months, and had materially improved under careful treatment. The anemia which originally had existed had mostly disappeared, still there was evidence of lack of compensation. She asked if she might be allowed to ride a wheel, and I advised against it, warning her of the great danger of overdoing, and especially of the temptation which the exhilaration of wheel riding creates to ride too fast and too far. In spite of the warning, she learned to ride a wheel and rode persistently all summer, but was careful to ride slowly and only moderate distances. Wheel riding did her good. Her heart improved steadily during that summer; it became normal in rate and diminished in size. Wheel riding proved in this instance a beneficial mode of exercise.

Next let me say a word or two with regard to the effect of digitalis. I was very much interested in the history of the particular case which Dr. Babcock has related, especially in the point which he makes as to the possibility of its administration so as to cause the left ventricle to pump an excessive quantity of blood backward into the right ventricle instead of relieving the latter of its over-distension by forcing the blood into the aorta in larger amounts. We can conceive that this is quite possible. We know that the relative amount of muscle fiber in the left ventricle is greater than in the right. I have long thought that the effects of digitalis were proportionate to the amount of muscle fiber. My attention was first called to the possible relationship of the effect of digitalis upon the heart to the amount of muscle fiber, by an experience with one case of enormously hypertrophied heart in a young girl. In this case there was absolute intolerance to digitalis in any form whatsoever. If given in minute doses, it would produce irregularity, nausea, and other symptoms of poisoning by the drug. Several other cardiac tonics could be given in moderate doses without producing these effects. I have seen similar effects produced by digitalis in other cases of hypertrophy, but none so striking. If it is true that digitalis produces its effects largely in proportion to the bulk of muscle fiber present, we would expect to find a greater effect produced by it on the left side of the heart than upon the right. And, if, as in the case described, the wall of the right ventricle had been most exhausted, the uneven effect of the drug upon the two ventricles could easily be produced. The left might then force blood against the stream propelled by the right.

It has been urged by some investigators of the action of digitalis, that it affects only the left side of the heart, by others that it affects the right side chiefly. I had occasion recently to look over the literature of the subject, and it does not seem to me that these contentions have been sustained. The majority of therapeutists today, those who have given special attention to the action of digitalis, agree that it affects the whole heart.

I frequently suggest respiratory exercises to patients suffering from cardiac disease, particularly if there is dilatation of the right side of the heart and venous congestion. I began to make such suggestions before attention was generally attracted to Schott's description of the beneficial results obtained from general exercise, performed slowly and in a graduated way. It is universally understood that to a considerable extent the movement of the venous blood is due to the suction effected by changes in intrathoracic pressure upon the great veins within the thorax, and it is surprising that the beneficial effects upon heart disease of respiratory exercises by increasing this suction or aspiration were not thought of earlier and used more generally than they have been. If respiratory exercises are practiced, it is desirable that deep inspiration, and complete expiration be made slowly. If practiced rapidly, it produces a degree of faintness and disturbs the circulation in a detrimental way. Moreover, the breath should not be held at the end of inspiration. At first, the inspirations should only be made moderately deep, but should be gradually deepened. These respiratory movements should not be repeated to close together. An interval should elapse between them.

Just one word with reference to the Schott method. I have had experience only of the effect of his exercises. I have not observed the effects of baths, as prescribed by him. The effect of the exercises is certainly most beneficial, and I believe it enables us in very many cases to get along without digitalis or other cardiac tonics, to the marked benefit of our patients.

Dr. GUSTAV FUTTERER—From what has been said by Dr. Babcock, I will consider three points: 1. The possibility of over-stimulation of the left ventricle of the heart at a time when the myocardium of the right ventricle, on account of its thinness, has become more degenerated than the former, should always be borne in mind. 2. I also would consider it of great benefit if we accept the suggestion of Dr. Babcock in reference to relieving the lungs affected by pneumonia from the weight of the heart by bringing the patient into a suitable position. 3. Dr. Babcock has pointed out a relation between

tonsillitis and endocarditis, and his observation is also in this respect a very valuable one. While it has long been supposed by some that there exists a relationship between tonsillitis and general rheumatic infections, the subject has not been studied very much, although general septic and pyemic infections originating from infected tonsils are surely not rare occurrences. Pericarditis, endocarditis, pleuritis and pneumonia, etc., often originate from this source. While I have observed this again and again, let me mention to you in short a few cases which have been reported by Jessen of Hamburg. In his Case 4 the clinical picture was mainly one of double pneumonia which originated from a tonsillitis. The patient, a girl of 24 years, first had an angina, then a pericarditis, then a double pneumonia, and after this general sepsis developed. Both tonsils had been reddened, swollen, and showed a whitish-yellowish covering along the crypts. The bacteriologic examination of this exudate revealed staphylococcus pyogenes aureus, short chains of small cocci, and large bacilli of an unknown kind. At the postmortem, all organs, the tonsils, lungs, spleen and kidney, were bacteriologically examined and staphylococci were found. In his Case 1, a man of 30 years of age became sick with general grave disturbances and pains in the joints. He was comatose. One tonsil was covered with a dirty greenish, and the other with a yellowish exudate. The bacteriologic examination of this exudate revealed staphylococcus aureus and streptococci. In his Case 3 there was an angina with streptococci, then a migrating pneumonia developed, and after this, pericarditis, pleuritis and nephritic irritation. But it is not even necessary that changes on the surface of the tonsil should be visible to prove a connection such as referred to. This I have been able to demonstrate through the observation of the following case, which was published in *Annals of Ophthalmology and Otology*, No. 23, 1898:

George K., a gentleman of 42 years of age, who has been under my care for some years past, had enjoyed a long period of perfect health, when on Dec. 20, 1895, he commenced to feel feverish, his temperature that day varying between 99.5 to 100.3 degrees. He also complained of a pressure in his head and of some headache, a condition which remained about the same, the temperature several times rising to 102 degrees, until December 28, when double vision appeared. During this time I saw the patient daily, but the most thorough examinations failed to reveal the cause of the above-mentioned symptoms. I then referred the patient to Dr. J. Elliott Colburn, who kindly furnished the notes referring to the condition of the eyes. On Jan. 2, 1896, Dr. Colburn reported: "O. D. marked flushing of the nasal side of the disc, most prominent at the lower side; flushing of entire nasal and lower portion of the retina; arteries enlarged and slightly tortuous; V. $^{20}/_{60}$; total loss of color sense for red, lower and contracted for yellow, white and green about normal. O. S. slight flushing of nasal side of disc; no change in arteries; small central red scotoma, field otherwise normal; pupil normal in reaction; paralysis of the external rectus of the right eye; extreme abduction, only drew it to 2 mm. of the median line.

During all this time I felt considerable apprehension about the nature of the trouble, the more so, as the patient five years ago had a tuburcular affection of the apex of the right lung, with tubercle bacilli in his sputum. He had recovered from tuberculosis entirely, but as I was at a loss how to explain the symptoms, I feared that a tubercular basal meningitis, or a solitary tubercle, might be at the bottom of the present condition. I therefore felt much relieved, when on the morning of January 8 the patient complained of sore throat, and on his left tonsil could be seen a whitish membrane, lying in a furrow, which ran in a vertical direction, measuring about 2 cm. in length and 4 or 5 mm. in width. There was no exudate on the surface of the other tonsil, nor on any other parts.

I took some of the membrane and brought it on different media into culture-tubes, with the result that in the incubator. streptococci, staphylococcus aureus and staphylococcus albus were cultivated. Loeffler's bacilli were not found. Right after caring for the bacteriologic examination, I treated the diseased tonsil with a disinfectant, and then injected 1000 units of Behring's antitoxin. At 3 P.M. the patient's temperature was 101.4, at 8 P.M. he had a severe chill, the temperature then being 103, and at 11 P.M. the thermometer registered 103.6. On the next day, January 9, the temperature ranged between 100.6 and 102; on the 10th between 99 and 101.2, and on the 11th, between 97.6 and 99.4. Then it became normal. On the evening of the day on which the membrane had been discovered on the right tonsil, the exudate had spread so rapidly that both tonsils had become covered with it. On January 12, all exudate had disappeared. On January 13, the patient went to his business, and after a few days more the headache had also disappeared entirely. On January 15, Dr. Colburn reported: "Paralysis of the right abducens more marked, slow action of levatores palpebrarum, with hesitation of the superior rectus." On January 23, the temperature again rose, ranging between 100 and 101, while the eye trouble increased, both eyes becoming affected, and severe headache set in. This condition continued until February 1, when another tonsillitis made its appearance, which was accompanied by very severe headache and much increase of the eye trouble. The right eye almost became closed. Diminished sense of taste and paresis of both right extremities. This state continued for about a month, only the exudate on the tonsils disappearing after a few days. The temperature ranged between 99 and 101 for the whole month, and the headache, which could not be relieved, became unbearable. There was a severe pain behind the right ear and a deviation of the tongue to the right side. On February 10, Dr. Colburn reported as follows: "Complete paralysis of all the muscles governed by the right third, and partial paralysis of the left abducens. Headache, confusion of vision and rotation of the image of the left eye; partial paralysis of the throat muscles and deflection of the tongue. From the date of last infection, the paralyzed muscles have slowly regained their activity, and are now performing their function almost perfectly." Until March 23, the patient improved steadily, having normal temperature right along. Then came a third attack of tonsillitis, which lasted for three days without, however, increasing the eye trouble. After this attack Dr. Colburn reports: "The fundus has become perfectly normal, the color sense returned and binocular vision for most ranges obtained. The treatment of the paralyzed muscles has been faithfully carried out from the beginning."

At last some rheumatic pains appeared in the extremities, and a lumbago developed with very severe pains. No specific history. Our patient is now perfectly well, and but slight disturbance of abduction of the left eye, and equally slight disturbance in the function of the superior rectus, are the only abnormal conditions which remain.

In conclusion, I would say, that the septic material which caused the first ocular disturbances was enclosed in some crypts of the left tonsil for several weeks, and without causing any visible changes on the tonsil, it could cause such far-reaching effects. As soon as the crypts opened up, the microorganisms could multiply, and within hours they caused the formation of an exudate which soon covered both tonsils. This fact certainly makes our case very instructive, especially when we also remember the severity and multiplicity of symptoms, particularly the lumbago, which no doubt has also been caused by those infections that entered by way of the tonsil.

Jessen's Case 2 demonstrates the same as my own case.

Case 2.—A woman of 28 years of age was admitted to the hospital in a comatose condition, with the diagnosis of typhus abdominalis. Widal's reaction gave a negative result. In the mouth, on the tonsils, and in the pharynx nothing abnormal was found except strong epithelial desquamation on the tongue. The patient was quite cyanotic and in the skin of the extremities some hemorrhages were found. Roseola. Spleen could be palpated. The lungs seemed not affected; heart not enlarged, and its sounds absolutely clear. Temperature 40.8. The urine contained no albumin, but numerous epithelial casts. There were twitchings in the left arm. The patient died after about twelve hours, without any particular change in her condition. The diagnosis was sepsis and uremia. Postmortem revealed the following: Left lung adherent; numerous small hemorrhages on the pleura of both sides; small degree of hypostasis; no changes in the lungs. The pericardium showed numerous ecchymoses, while the heart was enlarged and the myocardium contained small abscesses. On all valves fresh ulcerative changes were found without any fibrinous covering. The left false vocal ligament showed a small ulcer. The tonsils show a smooth surface, but the cut surface reveals thickened abscesses on both sides. The liver showed fatty degenerated; spleen very large and soft; kidneys soft, containing numerous small abscesses and hemorrhages. The uterus and the ovaries also contained a great many small abscesses, while the intestinal channel was normal. This case shows: 1, a general acute pyemia originating from the tonsil; 2, the exterior of the tonsil was apparently normal, and only the cut surface revealed foci; 3, a fresh ulcerous valvular endocarditis originating from the tonsillar infection.

Such observations would also be indicative of early removal of the tonsils. As to medical treatment, I have very frequently found that the symptoms accompanying acute tonsillitis yield to treatment with oil of wintergreen, which in an adult I administer by mouth, giving two No. 1 gelatin capsules filled with it, every two hours, until deafness, dizziness, or disturbance of the stomach becomes well marked. Then I would stop the treatment for a day and again proceed in the same way. If

the patient can not take capsules, the oil may be applied to the skin, a teaspoonful of it being rubbed into the skin of the back every two hours until general symptoms become marked. In children the external application is generally preferable, and from eighteen to thirty drops should be rubbed into the skin of the back, every two hours.

Chicago Gynecological Society.

Regular Meeting, Dec. 15, 1898.

Dr. NICHOLAS SENN, the president, occupied the chair.

Dr. HENRY BANGA exhibited a specimen from a case of carcinoma of the fundus of the uterus.

Dr. REUBEN PETERSON showed a specimen from a case of uncomplicated myoma of the uterus. He did a panhysterectomy.

Dr. CHARLES S. BACON read a paper on the "Etiology of Movable Kidney."

Dr. GUSTAV FÜTTERER discussed the

SYMPTOMS AND DIAGNOSIS OF MOVABLE KIDNEY.

He said that movable kidneys are rather common, generally occurring as a part of a group of symptoms, as represented by enteroptosis. Our knowledge of movable kidney only dates back to the last century, when anatomists were the only ones to call attention to displacements of the kidney. Bauhin found a left kidney in the left side of a small pelvis, where it was situated on the last lumbar vertebra and the upper part of the sacrum, its own upper pole being adherent to the lower portion of the right kidney. Sandifort also found a kidney in the pelvis. Drouin reports a very interesting case of a young girl, 17 years of age, who had died after a hemorrhage from the womb lasting for three months, but which had suddenly stopped. She then vomited blood until she died. Drouin found the right kidney, which was very much hardened and cartilaginous, weighing one and a half pounds, lying on the cecum, where it had strongly compressed the aorta and the vena cava. The kidney contained eight calculi, the largest of which was the size of a pigeon's egg.

Heusinger, Guignon, Hebenstreit, Eustachi, Trew, Hommel, Loeseke, Lejeune, Vidal, Chambau de Montaux and a few others have found a kidney located in the pelvis. Boinet saw one pressed transversely between the rectum and the bladder. Hohl reports the first case in which a floating kidney was found in a living human being, but it was not recognized during life. In two confinements of the woman whose case he reports, the midwife found a tumor in the left part of the pelvis, which, at each contraction of the uterus, caused a constant and increasing pain and retarded the progress of the head. During the first confinement, after noticing the tumor, the midwife sent for a physician, but the confinement ended happily and the afterbirth soon followed, before he arrived. At the second confinement, two years later, the midwife again found the same tumor, but trusted to the forces of nature, and again everything ended happily. The woman died at the age of 75 years, and the postmortem revealed a floating kidney behind the uterus.

Rayer was the first to observe and describe the clinical picture of the floating kidney. He says: "The movability of the kidneys, or the condition which allows them to descend, or to move forward or backward or upward behind the liver, is the source of various symptoms, especially of habitual pains in the abdomen and the corresponding organ—pains which have been mistaken for nervous colics, for hypochondriac phenomena and even sometimes for neuralgia in the lumbar sciatic region. It is a long time since I have called attention to this affection by giving cases. "Velpeau and Gerdy, my colleagues at the Hospital de la Charité, Bell, Donne, Thirial and De Bang, have observed several cases in my clinic. I brought this affection of the kidneys to the knowledge of two physicians who were very anxious to find out the nature of continual pains which they themselves felt in the right lumbar region, where they had diagnosticated a movable tumor of the nature of which the most contradictory opinions had been given. Many years back a few remarks were made concerning the movability of the kidneys and of the displacements which they can undergo, but these remarks, besides being very incomplete, mostly given by anatomists, did not at all call forth the attention of the physicians. Mesné in a vague manner, has mentioned the displacement of the kidney and bladder, which, according to him, can be caused either by external violence or by internal causes. Most of the authors who followed his opinion, emphasized that the kidneys may be displaced either by a tumor of the liver, the spleen, etc. Nevertheless, the following passage extracted from Riolan deserves to be mentioned: 'Although the kidneys seem to be strongly attached to the loins, they are, nevertheless, liable to leave their places, to become displaced, to fall forward, sometimes even descending to the lower abdomen, which can not happen without endangering life. The truth of this can not be questioned. The cause is not only the melting of the fat capsule, but also its enlargement and gain in weight, either by a tumor which originated there, or by a calculus of the pelvis of the kidney. The kidneys are carried down by their own weight, as their ligaments are not strong enough to keep them in position, whence it happens that after having remained for a certain length of time in the place to which they had descended, they begin to rot and become filled with abscesses.'"

Dr. Fütterer then briefly reported eight cases of movable kidney by Rayer, and he also gave a short report of eighteen cases that he had himsef observed. In every one of the cases a general examination was made, and he considered them all uncomplicated, except probably two.

Dr. H. B. STEDMAN followed with a paper on the same subject. He said that in considering the symptomatology of movable kidney, in a certain percentage of cases it is found that compensation is so effective and reflex disturbances so slight that no symptoms appear. The kidney may be displaced to a degree that the whole organ can be recognized by palpation below the costal arch, and yet the patient be entirely free from any distress; or the organ may attain to a size sufficient to be easily felt by the patient, and still it may cause no inconvenience, much less pain or distress. The symptoms, however, which are most generally associated with this condition are pain, gastric distress and nervousness, and the order in which they are stated is the relative frequency in which they occur. In a large majority of cases these symptoms are associated with impairment of the general health; the patient is ill-nourished; anemic; has loss of appetite; feeble digestion; functional gastric and cardiac disturbances; nausea and vomiting; is extremely emotional, becoming even at times hysteric or melancholic. In some of these cases it is found that a primary disturbing or deep-seated constitutional affection which has interfered with assimilation and nutrition, bringing with it that train of symptoms which is associated with anemia, and also the lesions which follow great distension of the abdominal wall in consequence of frequent pregnancies, mask the condition of the kidney at present under consideration. But in that class of patients who are afflicted with movable kidney in consequence of some traumatic cause, cases in which the perinephritic condition has not become masked through any constitutional disease, or in which the peritoneal support has not been withdrawn in consequence of a distended abdominal wall, the affection is more easily recognized. Here the primary affection is the displaced kidney; it stands out alone, and is not masked by lesions of neighboring organs. It is in these cases that replacement not infrequently relieves the pain, and nephrorrhaphy effects an entire cure.

In the diagnosis of movable kidney the physician relies to a great degree upon palpation and percussion. Palpation can only be successful in the great majority of cases where displacement is not very marked, by placing the patient in a position to insure the greatest relaxation of the abdominal muscles. In percussion we have a most valuable aid in diagnosis. For example, the percussion note over the lumbar region in displaced kidney is frequently more tympanitic and the resistance over the same area is lessened, and with these conditions there exists in this region a depression which is effaced when the organ is replaced. Percussion is of great value in determining whether an organ that is recognized by abdominal palpation is intra abdominal or postperitoneal, for example, to differentiate between the kidney and the spleen, or the kidney and the liver, or any other body within the abdomen that possesses a certain degree of solidity. The use of percussion may also be most helpful in those cases where examinations by palpation are difficult, in consequence of the depth of the thorax, the thickness of the trunk, and the accumulation of fat in the abdominal walls. This is especially so, if the kidney be but slightly movable, but, as stated above, it becomes of value only as being additional evidence added to facts that have been previously settled through a process of exclusion. Valuable information from a diagnostic standpoint is gained by an examination of the urine. A quantitative as well as qualitative analysis may throw much light upon an obscure point, but if the study includes the catheterization of the ureter or the use of the Harris segregator, one is frequently able to demonstrate, beyond all possibility of doubt, the true nature of the lesion.

The following lesions may at times be confounded with a movable kidney: A solid ovarian tumor which occupies the median line, a displaced spleen or liver, the gall-bladder, an echinococcus cyst of the liver with a pedicle, the accumulation

of feces in the flexure of the colon, carcinoma, and sarcoma of the abdominal organs and omentum, not excluding the kidney itself, perinephritic abscess, growths in the abdominal wall and appendicitis.

In considering the subject of differentiation, there are several anatomic and pathologic facts which, if kept in mind, will help one materially:

1. The postperitoneal position of the kidney as compared with the liver, spleen, gall-bladder, various cysts and growths within the abdominal cavity, which can be easily demonstrated by combining percussion with inflation of the bowel.

2. The reniform shape of the kidney in comparison with the characteristic shape and feel of the spleen, liver, gall-bladder, etc.

3. The immobility of the displaced kidney during inspiration and expiration, as compared with the descent and ascent of the spleen and liver and growths connected with them during respiration.

4. The pulsation of the renal artery, which, if felt at all, will always be recognized as part of the pedicle, for it must be remembered that the range of motion of the kidney is determined by the vessels, nerves and ureter.

5. The ease with which the organ can frequently be moved from place to place and restored to its normal position, in comparison with organs or growths whose positions are fixed.

6. Tenderness on pressure, and the sickening sensation which is produced by compressing the organ between the two hands.

In ovarian cyst the development of the tumor and recognition of its origin may be determined by vaginal examination. In echinococcus cyst, that is, pedunculated, differentiation may be quite difficult, unless a hydatid fremitus can be felt; otherwise recourse can be had to aspiration. In fecal impaction, copious enemata with the liberal exhibition of cathartics, will rarely fail to clear up the diagnosis; and if the coprostatic mass envelops the kidney, by dislodging the same the bean-like form of the organ will stand out in plain relief.

It should constantly be borne in mind that, excluding the symptom of pain, the movable kidney has little in common with ordinary inflammation, and thus in the presence of the characteristic symptoms of appendicitis or the edema, redness, tenderness upon pressure, with probable fluctuation of a perinephritic abscess, the physician should hardly fall into the error of confounding either of the two with displacement of the kidney.

Dr. L. L. McArthur followed with a contribution on

THE SURGICAL TREATMENT OF MOVABLE KIDNEY.

Admitting that not every case of movable or floating kidney requires operation, and after due consideration, having concluded that the case in question requires surgical intervention, basing such a conclusion upon the facts: 1, that all palliative treatment has failed; 2, that the sufferings of the patient are having a progressive, injurious influence on his (or her) physical or psychic being; and 3, that the temporary reposition of the organ affords at least partial relief, the question to be decided remains as to what surgical procedure is to be selected.

In the effort to produce cicatricial tissue in operations for movable kidney, the essayist stated that Bassini, in addition to introducing sutures of catgut, painted the posterior aspect of the fibrous capsule of the kidney with 8 per cent. chlorid of zinc; Albarran used 95 per cent. carbol, or 4 per cent. $AgNO_3$; Koenig, by packing gauze to the exposed surface, with the idea of developing a large mass of cicatricial tissue from the posterior aspect of the kidney to the skin, succeeded in curing many cases, but kept his patients from six to twelve weeks in bed with a discharging wound. McBurney's efforts to cure hernia by the open method teach the futility of relying upon cicatricial tissue, and failures by all the methods enumerated led to the next step toward the ideal, namely, that of substituting living, healthy fibrous tissue for that of cicatricial tissue, and induced Poullet to suture the kidney to the lumbar wall by means of tendons taken from the long dorsal muscles, detached at one end, sutured through the kidney, then fixed in the wall of the wound. On animals, fourteen months later, the kidney was found still in place and tendons bright and shiny. Veulliet likewise did the same. Krieger recommended the use of a bundle of muscular tissue from erector spinæ, the idea being the same: that of fixation by normal living structures. The evolution of this idea still progressing, led Péan to suture after the usual perpendicular incision; the posterior flap of the inner layer of lumbar fascia to the loosened fatty capsule of the kidney, thus creating a band or bridle of tissue over which the pedicle of the kidney might ride. The essayist believes he takes the next step in advance toward the ideal by a procedure with which all perforating sutures of the kidney parenchyma may be abandoned while supplying a fair substitute for the folds of peritoneum and transversalis fascia which normally hold the kidney in place. It has seemed satisfactorily accomplished in this manner:

1. A curved transverse incision below the last rib is made through all the structures at once down to the peritoneum anteriorly.

2. The peritoneum is then loosened from lateral parietes by blunt dissection sufficiently to permit boldly enlarging the posterior angle of the wound without fear of injury to important structures quite back to the quadratus.

3. The fatty capsule of the kidney is loosened by blunt dissection.

4. The anterior layer of the lumbar fascia is then loosened from the tissues on which it lies to such an extent as will admit the kidney in the pocket thus made. The lower flap of the wound now has a compartment for the lower half of the kidney.

5. Prior to inserting the kidney in the new compartment, the cut edges of the transversalis aponeurosis have inserted in them two or three stitches which serve to pucker the pocket containing the kidney.

6. The kidney having first been dislocated upward, its lower end is slid into the pocket.

7. Closure of the stitches in the aponeurosis of the transversalis now fixes the lower half of the kidney external to one of the layers of the abdominal parietes, supporting the same by so broad a surface that no injury to the kidney can result, and no displacement occur, and employing a normal (not transplanted) tissue.

The essayist has found it sufficient to make the pocket for the lower half of the kidney, and suggests its use in the movable cases, where a very complete arrest of its wanderings can be secured, two or three stitches can be made to hold the kidney until adhesions form. By this arrangement, too, the movements of the other abdominal organs can not dislodge the kidney in question, it being external to one of the layers of the abdominal wall, and pressure from above tending to drive it deeper into the pocket thus formed.

Since surgeons only recommend operation in those cases in which palliative treatment, internal medication, orthopedic appliances, etc., have failed, and since by any of the various methods proposed a cure can not be effected in most of these otherwise hopeless cases, he believes we are justified in recommending operation, remembering always that progress so far has been greatest along those lines which seek to interpose living normal substitutes for the relaxed ligaments of the kidney instead of sutures.

San Francisco County Medical Society.

Regular Meeting, Jan. 10, 1899.

Dr. J. Henry Barbat presented to the meeting a report of

THREE CASES OF ECTOPIC PREGNANCY.

Dr. Barbat states that he was led to report the following cases through a firm belief that ectopic pregnancy is a condition of much more common occurrence than is generally thought; and as the general practitioner sees these cases in almost every event before they reach the hands of the gynecologist or surgeon, it is well to emphasize again and again their common occurrence, comparatively, and their diagnostic features. Diagnosis is not always easy, but it should be made in all cases if the subjective and objective symptoms are weighed with sufficient care.

Case 1.—A married woman, with two children living, and a history of several abortions, the last of which she confessed to having brought about herself, was seized with a sudden and violent pain in the left side of the abdomen, low down, and commenced to flow profusely. Examination revealed a slightly enlarged uterus in the left part of the pelvis, but no temperature, abnormal pulse, or other indication of grave condition. There were no symptoms of pregnancy. He prescribed a uterine sedative and left instructions to be called should any new symptoms arise. He was called again on Aug. 14, 1898, having first seen the case on July 29, 1898. When examined at the second visit, the patient still gave no indication of pregnancy, there was no abnormal pulse or temperature, the tongue was clear and the digestive tract in good order. She had been flowing since July 29, and there was still considerable pain—indeed, the pain and the flow were the only symptoms. Bimanual examination located a tumor about the size of an orange in the left side of the pelvis, and a smaller tumor on the right side. Diagnosis of ectopic pregnancy was made, and operation decided upon. The uterus was first curetted and the curettings saved for microscopic examination. On opening the abdomen about a pint of fluid and clotted blood escaped. The left tube was enlarged at its central portion to a diameter

of about one inch; the extremities were normal. After removal, pressure on the enlarged portion of the tube expressed dark fluid blood from the two ends, showing the lumen of the tube to be intact. On opening the tube, a clot, but no fetus, was found. The appendix was somewhat inflamed, so it was removed. The right ovary was the seat of some slight cystic regeneration, but it was not removed. The curettings were examined and showed broken-down embryonic tissue. The patient made a rapid and uninterrupted recovery.

Case 2.—The patient was married, 30 years old, and had one child 8 years of age, and gave history of an abortion eighteen months before seeing Dr. Barbat. She had been in bed suffering considerable pain and constant flow for three months. The case was very much like Case 1, in that there were absolutely no symptoms of pregnancy. There were masses on both right and left sides of the pelvis, with pain and tenderness. Diagnosis of ectopic pregnancy was made and immediate operation decided upon. The left ovary was found to be cystic, the right tube was swollen about its center, much as the tube in Case 1. There was considerable dark fluid and clotted blood in the abdomen and pelvis, which was cleaned out. No fetus was found, but the swelling of the tube was seen to be due to a clot. The curettings showed evidences of a previously developing ovum.

Case 3.—This patient was married, and 33 years old. Health previously had always been good. She had one child, 7½ years old. She failed to menstruate on Oct. 2, 1898, and subsequently developed signs of pregnancy; had morning sickness, tender breasts, etc. On Dec. 14, 1898, she felt a sudden violent pain in the abdomen. Abortion was at first diagnosed, and the uterus curetted; no ovum was found. The case was carefully watched, and the elevated temperature, rapid pulse and pain continuing, it was decided to examine bimanually, under an anesthetic. Such examination was difficult, owing to the size of the woman and the amount of fat on the abdominal walls. A mass was discovered, however, in the right side of the pelvis, the diagnosis of ectopic pregnancy was confirmed, and operation decided upon. Dec. 24, 1898, the abdomen was opened and a large amount of fluid and clotted blood escaped. Near the right cornu of the uterus was found a large mass of tube, ruptured membranes, and a two months fetus. The whole was at once clamped and removed. Hemorrhage was controlled without much effort, though everything had to be done with great rapidity, owing to the extremely low condition of the patient. While washing out the abdomen, a second fetus was found. The abdomen was filled with normal salt solution and closed. There was marked and immediate improvement in the condition of the patient, following the operation. Before, her temperature had been uncertain and she had been extremely nervous; afterward she was very tractable and cheerful. Recovery was uneventful.

Dr. Barbat said that he thought there were many cases of ruptured tubal pregnancy in which the patient partially recovered, but that there was always some pelvic or abdominal trouble which remained for life. The diagnosis, though not easy in many cases, should always be made. Signs of pregnancy were not always present, and were not necessary to make a diagnosis. Pain, sudden sharp pain in the abdomen, low down, leaving tenderness, should point suspicion to the possibilities of ectopic pregnancy. It could be mistaken for appendicitis or a passing renal calculus, but bimanual examination would clear away these possibilities. Medical and electric treatment of the condition, once diagnosed, he conceived worse than senseless—operation was absolutely the only course. In operating, the vaginal route was to be strongly condemned, for it did not permit sufficient freedom, nor could the abdomen be packed in case of severe hemorrhage.

Dr. E. E. KELLEY said that sometimes these cases were extremely puzzling, and he thought identic symptoms might be caused by the presence of a hematoma. He was undecided as to whether a hematoma was always caused by a previous ectopic pregnancy or not. He cited a case at the present time under his observation, in which he had operated two months ago for ectopic pregnancy. Six weeks later the patient menstruated, but while walking about again experienced severe pain, etc., only this time it was on the opposite side of the abdomen. Previously the pregnancy had been on the right side, and at the time of operation he had examined the left tube and ovary, and they were normal. Now there is pain, tenderness and soreness on the left side, and constant flow. He was uncertain as to whether he had to deal with another ectopic pregnancy or a hematoma.

Dr. MCCONE mentioned his recent experience with three cases of ectopic pregnancy. In two of them the diagnosis at first made was that of an incomplete abortion. There were no signs of pregnancy. He had found the menstrual histories did not agree, and that but little importance was to be given to that question; the same would also hold true of the signs of pregnancy, for they were most unreliable. Having made the diagnosis, operation was the only thing to do, and operation through the abdomen, not by the vagina. He asked whether both ovaries had been examined with the idea of determining whether both ova came from the same ovary or not, this being still an open question in the embryology of twins.

Dr. F. B. CARPENTER said that as he had been interested with Dr. Barbat in these cases, he must emphasize Dr. Barbat's plea to the general practitioner to be always watchful for this conditions. Of the treatment there could not be two opinions, but he had found many men who were so obstinate that they were unwilling to change their diagnosis, or alter their treatment even when the indications were most clear. He should consider any man who would attempt to operate by the vagina in these cases as either incompetent or insane.

Dr. KUKIM said diagnosis was not always made by the gynecologist, and in one case within his recollection, a gynecologist had laughed at such a diagnosis, made by a general practitioner, but was convinced by operative demonstration.

Dr. FORD said that he had recently had a stitch-hole abscess, following operation, which he attributed to some of the fibers from the cotton sponges used. He had, therefore, used a silk handkerchief for sponging in his last operation and had had no trouble.

Dr. HESS had not before heard of the use of a silk handkerchief, but thought it might be very good.

Dr. BARBAT, in closing the discussion, thought it doubtful that a few microscopic cotton fibers could produce a stitch-hole abscess or a "bellyache." He was of the opinion that hematoma always was caused by an extrauterine pregnancy. In the third case the unaffected ovary was not examined because of the weak condition of the patient, transfusion of salt solution having been required as it was. No terms could be too strong in which to condemn the operation by vagina.

SELECTION.

Experimental Pathology.—Prof. P. Knoll's inaugural address on assuming the chair of general and experimental pathology at Vienna was an eloquent plea in favor of increased facilities for experimental research on animals. This science, he observed, is still in its infancy, but by producing disturbances in the functions of animals, by observing them and applying remedies—possibly inapplicable to man—by studying the conditions of their origin and their effect on the general organism, we have learned the essential conditions and been able to comprehend a number of morbid processes previously inexplicable. He mentioned as an instance the irregularities in the pulse observed in elderly persons, or with angina pectoris, or with severe neuralgia, sometimes in persons apparently normal, which were always a mystery until personal experimentation demonstrated that they were caused by an over-filling of the heart cavities, the result of a lack of proportion between the resistance in the circulation and the functional capacity of the heart. . . . It has been proven by experiments on animals that these irregularities consist partly in the weakening of the rhythmic heart-beat, but principally in a premature single systole, usually very much weaker than normal, followed by a heart-pause, just as much longer than the normal heart-pause as the previous heart-beat was premature. It had been further demonstrated on animals that the irregularity may be limited to the left half of the heart, when the increased resistance is only in the arteries of the larger circulation and the weakening of the heart is only noticeable in the left ventricle, such as can be produced in animals by a moderate degree of dyspnea. This at once explained the mysterious "hemisystolic cordis" in man, in which the venous pulse is twice as rapid as the arterial. These and similar experiments have proved of incalculable benefit in explaining and suggesting rational methods of treatment for a large variety of heart troubles, and have also led to the discovery of sensory heart nerves. When irritated by compression of the heart as from effusions in the pericardium, they affect the vagus and increase

the pulse, thus explaining the pulsus paradoxus in mediastino-pericarditis. After referring to the important facts in regard to the respiration established by experimentation, he concluded with a summary of the interesting information derived from experimental study of the striped muscles: 1. That the amount and distribution of the interfibrillary substance and the arrangement of the fibrillary, differ not only with the animal, but throughout the striped muscles of the same individual. 2. That in any pathologic process the primary changes occur in the interfibrillary substance and only secondarily affect the fibrillary, which opens quite a new horizon for the pathologic histology of the striped muscles, the more important as, according to Weigert's statements in regard to fatty degeneration of the human musculature, the processes seem to be analogous. 3. That in the muscles of cold-blooded animals, at certain seasons of the year, fat accumulates in the interfibrillary substance, to disappear again at other seasons, which enables us to appreciate the peculiar changes that accompany the changes in the seasons in cold-blooded animals, and when we recall the moulting of birds, the shedding of the fur and the hibernation of mammals and also the fact that man is more liable to certain diseases at certain seasons of the year, and that the muscles are more easily tired in the spring, there is every reason to believe that these observations open up a line of research which may bear rich fruits for human pathology in the future. . . . "We hesitate now before we attribute the exclusive formation of certain cells of the blood to certain organs, when we learn that these cells are found in lower animals in whom the organs are entirely absent." . . . "After all, we are still standing on the threshold of that 'grand independent and sovereign science of facts and experiments: pathologic physiology.'"—*Vienna klin. Woch.*, Dec. 22, 1898.

PRACTICAL NOTES.

The Florence Sperm Test.—Perrando has established that the lower the the temperature, the more distinct the reaction, especially if the fluid is much diluted.—*Gaz. degli Osp.*, Dec. 18, 1898.

Abortive Treatment of Gonorrhea.—Janet has been most successful with copious irrigation of the urethra with plenty of water and extremely weak solutions of potassium permanganate.—*Bull. de l'Acad. de Méd.*, Dec. 13, 1898.

Sterilizable Insulators for Electrolysis.—It is difficult to sterilize ebonite and rubber without injury, and Lucas suggests making the intrauterine electrode of glass. For cases requiring greater flexibility he uses an insulator made of woven asbestos, which can be sterilized in the fire.—*Bull. de l'Acad. de Méd.*, Dec. 20, 1898.

Sympathicotripsy.—Chipault suggests crushing the superior cervical ganglion, an operation which produces the opposite effect to sympathectomy and may prove valuable in the therapeutics of a large number of mental affections originating in intermittent or chronic congestion of the brain.—*Bul. de l'Acad. de Méd.*, Dec. 28, 1898.

Oil of Wintergreen for Chorea.—Fornaca reports seven cases all rapidly cured with the oil of gaultheria procumbens, administered per os or by absorption through the skin. "It deserves a place beside sodium salicylate in the treatment of chorea with or without rheumatic complications, and can substitute it when the latter is not tolerated.—*Gaz. degli Osp.*, Dec. 25, 1898.

Nephritis of Bronchial Origin.—J. Seitz has observed four recent cases in which an acute bronchitis was followed a few days later by nephritis, and numerous pyogenic staphylo and streptococci were found in the kidney, the same as had been abundantly noted in the bronchi. The respiratory passages can thus serve as a culture-medium for the pathogenic germs of nephritic processes as well as for those involving the lungs and tonsils.—*Semaine Méd.*, Dec, 28, 1898.

Value of Preparations of Hemoglobin.—Prof. V. Starck concludes from a series of experiments that hematin and hemoglobin preparations are less readily absorbed by the organism than the ordinary iron preparations, which he found diffused throughout the tissues, while the former passed away comparatively unaltered, per rectum.—*Deutsche Med. Woch.*, Dec. 22, 1898.

Cerebellar Abscess of Otitic Origin.—Picqué acknowledges that the best means of entering these abscesses has yet to be discovered. He considers Wheeler's method entirely inadequate, and prefers the application of the principle of the large craniectomies successfully adopted for the lateral surface of the skull. He observed that the conditions in childhood and adult life are so diverse that no conclusions from one can be applied to the other.—*Semaine Méd.*, Dec. 28, 1898.

Rupture of the Suprapatellary Tendon.—Vergely describes a case of traumatic rupture of the tendon, just above the patella, in an elderly man. The smooth cut ends were not far apart, and massage every day for fifteen minutes, followed by a compressing bandage and immobilization resulted in a complete cure in thirty-two days, the patient resuming his business in forty-five. He adds that he has only been able to collect forty similar ruptures in the literature.—*Archives Clin. de Bordeaux*, September, 1898.

Anterior and Posterior Gonorrhea.—To differentiate the two, Dr. E. Sehrwald copiously irrigates the anterior urethra with a 1 per cent. solution of boric acid and then injects a 0.25 per cent. solution of pyoktanin, which is retained five minutes in the canal and then washed out with the boric acid solution until there is no trace left. The subject is then ordered to urinate. If the urinary filaments are stained violet, it indicates that they come from the stained anterior portion, and the reverse if unstained.—*Cronica Méd. Mexicana*, January 1.

Agoraphobia and Ear Troubles.—Lannois and Tournier conclude a study of agoraphobia with the statement that it is not a primary affection, but a syndrome developing on a special neuropathic soil. The soil may be a neurosis or a psychosis. One occasional cause of agoraphobia is an affection of the ears, causing vertigo and subjective noises. When the inciting cause was a fright not associated with vertigo (an epileptic seizure, chill, colic, hysteric attack) an affection of the ear is very frequently the cause of its persistence.—*Rev. Heb. de Laryng.*, Dec. 24, 1898.

Ferrous Arseniate in Malarial Infection.—Valvassori-Peroni reports constant success with citro-ammoniac ferrous arseniate in severe cases of malarial infection, some rebellious to quinin. It was administered in subcutaneous injections in the buttocks, and was well tolerated, even by infants. He cured twenty-three cases with thirty to forty injections. The solution used represented .05 gm. ferrous arseniate per c.c., graduating the injections from a third or half to a whole syringeful a day. He is enthusiastic over the rapid improvement and the disappearance of the parasites from the blood. Every case treated was cured.—*Gaz. degli Osp.*, Dec. 20, 1898.

Guaiacol for Erysipelas in Children.—Villa arrested and cured a severe case of erysipelas around the umbilicus in a new-born infant, by painting the region with a 20 per cent. solution of guaiacol in oil, after cleansing with warm boric acid solution. The fever fell almost at once, and as it rose again the painting with guaiacol reduced it each time a degree and a quarter. To prevent irritation the applications were alternated with inunctions of Peruvian balsam. The process was arrested the second day, and cure complete by the sixth day of treatment. Similar results were obtained with a four-months child, using

a 30 per cent., and with a four-year-old girl, with a 40 per cent. solution. He consequently recommends the application of this method to children as well as adults, extolling its efficacy and harmlessness.—*Semaine Méd.*, Dec. 28, 1898.

Treatment of Chronic Cutaneous Affections.—W. P. Serenin announces brilliant results in the treatment of nevi, lupus, cicatricial ulcerations and a few kinds of cutaneous ulcerations, with elastic dressings. The affected surface is wrapped in an elastic bandage which exerts a constant slight pressure. The dressings are removed in twelve to twenty-four hours, washed, the surface carefully cleansed and the dressings applied again after a short interval. One and a half to several months may be required, but the slight pressure, the warmth and moisture, the keeping quiet and the protection from external injury conquer the affection in time.—*Cbl. f. Chir.*, Dec. 31, 1898.

Calomel in Typhoid Fever.—Andrievsky treated seventy-one cases of typhoid fever and a parallel series of forty-nine, the first series with .3 grams of mercurous chlorid three times a day, and the second series with quinin. The patients treated with the calomel continued taking it until the evening temperature was normal, the total varying from 8 to 20 gm., without any indication of stomatititis or aggravation of the diarrhea. All the cases proved benign, frequently abortive, the fever was arrested more rapidly and the mortality (2.82 per cent.) was less. None of the patients died who had been treated with calomel from the first week.—*Semaine Méd.*, Dec. 28, 1898.

Modified Tarnier Method of Inducing Delivery.—Sobestiansky uses a metallic tube instead of Tarnier's soft tube. One end terminates in a sac which is inserted empty into the uterus, the other end extending to the thigh, to which it is fastened. The end on the thigh is then connected with an irrigating receptacle and the sac filled with water, which induces contractions of the uterus. As the uterus contracts it empties the sac, which fills again in the intervals, and thus exerts an intermittent action much more effective than constant pressure. As the contractions become more violent, the water receptacle is raised to insure greater pressure, thus preventing the expulsion of the sac.—*Semaine Méd.*, Dec. 28, 1898.

Soap Prophylaxis of Soft Chancre.—Professor Giovannini produced an abrasion on the external genitals of a number of persons of both sexes already affected with soft chancre, and inoculated the abrasion with pus from a chancre. In ten minutes to an hour the spots were rubbed with common soap (Marseilles), and washed thoroughly with cold water from a running faucet. In eleven out of twenty-one the abrasions healed without infection (ten out of fifteen in which they were washed in less than fifteen minutes). In other tests with water, but without soap, infection was constant. As a prophylactic measure, therefore, washing with soap is valuable, but only when occurring within a few minutes of contagion.—*Semaine Méd.*, Dec. 28, 1898.

Utero-Intestinal Fistula.—F. L. Neugebauer has collected twenty-eight cases in the literature. Twenty-one were pregnant or recently delivered. In eleven cases the fistula was caused by the retention of the dead fetus. In nine the fistula appeared immediately after delivery or consecutive to an obstetric operation, or a gangrenous puerperal metritis. Fourteen recovered and fourteen died. Among the fourteen recoveries the fistula healed spontaneously in eleven, after the retained fetal fragments had been evacuated by the vagina or rectum. Celiotomy resulted in two cures. Among the fourteen deaths, nine succumbed to pyemia, two to tuberculosis, one to yellow fever, and two died after celiotomy.—*Semaine Méd.*, Dec. 28, 1898.

Aqueous Suprarenal Extract.—Swain (*N. Y. Med. Jour.*, Dec. 24, 1898), writes on the local use of aqueous extract of the suprarenal glands of the sheep in the nose and throat. His observations go to show that this extract is a powerful local vasoconstrictor agent and a contractor of erectile tissue, and safe to use in considerable amounts without any local deleterious effects. The local effects can be reproduce in the same individual apparently any number of times, without entailing any vicious habit either to the tissue or to the individual, and with reference to any drug which may be locally used following it, the extract seems to strengthen the effects. He considers its widest application and greatest opportunity for good in acute indigestion, and also in certain chronic conditions of the hay-fever type, where edematous tissue seems prone to develop. Its objections are difficulty in producing it in quantities and prevention of decomposition in standing (vide JOURNAL, Nov. 19, 1898, p. 1246).

Zinc Glue Dressings for Ulcus Cruris.—Dike reports very satisfactory results with the zinc glue dressings applied to ulcers at Cracow for a year or so. The ulcer is first cleansed in an antiseptic solution, requiring an hour bath and frequently, for several days; then the edges, the leg and the foot are smeared with zinc glue (zinci oxid., gelat. albæ ãã 20 gm., aq. dest. and glycerin ãã 80 gm.) warmed in a water-bath. A piece of sterile gauze is laid over the tumor (atonic ulcers or those with an excess of granulations are first touched with nitrate of silver and excessive secretions dried with dermatol). The leg is then wound to the knee with several layers of a bandage, repeating the application of the glue two or three times. The bandage is left undisturbed until it becomes soaked with the secretions: three or four days at first, to several weeks later. The patient can go to his business from the first. A small ulcer requires about as much time to heal as does a large ulcer. Among the fifty thus cured were a number that would have required amputation otherwise.—*Vienna Med. Woch.*, Dec. 17, 1898.

Operations on Syphilitics.—From a study of a hundred operations on syphilitic patients, Michailow draws the conclusions that the syphilitic diathesis is principally noticeable in a diminished elasticity of the vessels and diminished coagulability of the blood. Wounds bleed a great deal, especially in the tertiary period; granulations are scanty, and succumb to fatty degeneration or become hypertrophied, edematous and pale. Wounds heal very slowly, with much serofibrinous or seropurulent secretion. The wound edges atrophy at the slightest pressure. Chemic antiseptics have to be avoided; moist warmth best favors healing. Plastic operations and Thiersch transplantations frequently fail. This diathesis commences in the condylomatous period and is especially pronounced in the gummatous, and with insufficiently treated syphilis. He never noted any typic efflorescence at the wound. In a few cases severe pains in the tibia disappeared after trephining the tibia. He urges further study of this diathesis, which was only absent in a few rare cases in his experience.—*Cbl. f. Chir.*, Dec. 17, 1898.

Appendicitis and Pregnancy.—E. Fraenkel concluded an address on this subject, recently, with the remark that pregnancy has no specific influence upon the course of appendicitis, and appendicitis does not necessarily affect the pregnancy unfavorably, although abortions and premature deliveries are more frequent. The interruption of the pregnancy is not the cause of death, but the severe local infection, which is the cause of the abortion. Extensive adherences with the genital organs only rarely induce abortion. There is a possibility of disturbances during the postpartum period from adherences. Perforation of the abscess may occur during contractions of the uterus. Exacerbations of the appendicitis may lead to puerperal infection, and there is also a possibility of parametritis. The prognosis is "not favorable" for the mother; "unfavorable" for the child. The diagnosis is best confirmed in narcosis, patient on the left side. With a first slight or moderate attack, expectant treatment is indicated, but recurrence always calls for an operation, which does not differ from the usual intervention.—*Deutsche Med. Woch.*, Dec. 22, 1898.

THE
Journal of the American Medical Association
PUBLISHED WEEKLY.

SUBSCRIPTION PRICE, INCLUDING POSTAGE:

Per Annum, in Advance $5.00
Foreign Postage 2.00
Single Copies . . . . . 10 Cents

In requesting change of address, give old as well as new location.

Subscriptions may begin at any time and be sent to

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION
No. 61 Market Street (Occidental Bldgs.), Chicago, Illinois.

MEMBERSHIP IN THE AMERICAN MEDICAL ASSOCIATION.

This is obtainable, at any time, by a member of any State or local Medical Society which is entitled to send delegates to the Association. All that is necessary is for the applicant to write to the Treasurer of the Association, Dr. Henry P. Newman, 100 Washington St., Chicago, Ill., sending him a certificate or statement that the applicant is in good standing in his own Society, signed by the President and Secretary of said Society. Attendance as a delegate at an annual meeting of the Association is not necessary to obtain membership.

On receipt of the subscription the weekly JOURNAL of the Association will be forwarded regularly.

Gentlemen already members of the Association should send their annual subscription to the Treasurer, or direct to the JOURNAL office.

All communications and manuscript of whatever character, intended for publication in the JOURNAL, should be addressed to the *Editor*, and all communications relative to the business of the JOURNAL, proof-sheets returned, or in regard to subscriptions, should be addressed to THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, 61 Market Street (Occidental Buildings), Chicago.

Original communications are only received with the understanding that they are exclusively contributed to this JOURNAL.

SATURDAY, JANUARY 28, 1899.

THE BRITISH ANTI-VACCINATION AGITATION AND ITS RESULTS.

When the British parliament passed the act permitting an evasion of compulsory vaccination on the ground of "conscientious objections," it was contended, in answer to its opponents, that this clause would be taken advantage of by but a very small proportion of the population, and that whatever evil consequences might ensue would be minimal at the very worst. Since the passage of the act, however, the number of claimants for exemption on the ground of conscience has, if we are to trust a London dispatch, become alarmingly large—some 500,000 certificates have, it is estimated, been already given out, presumably to heads of families. The magistrates, it seems, have no discretion in the matter, but must give the certificate to whoever is willing to swear that he or she is actuated by conscientious scruples against vaccination.

When we consider the comparatively short time that has elapsed since the passage of the act, and the activity of the anti-vaccination propaganda, which includes in its numbers all classes of the population, and even a scientist like A. R. WALLACE, the prospects of large additions to this number must be contemplated. Instead of 500,000 families escaping vaccination there may be many millions if the fad spreads, and it is one that is certainly liable to spread for a while, until checked by bitter experience. The English people have been so long free from smallpox in an epidemic form that they do not realize the alternative they risk in rejecting vaccination, and the result may be, as RIDER HAGGARD'S "Dr. Therne" says, that before very long they may find that they are not quite so numerous, and that many of them are not so good looking as they were. To speak more considerately, however, of such a misfortune, induced by ignorance and stupidity, there is certainly a real danger of very serious epidemics of smallpox in Great Britain if this law is not amended, or at least shorn somewhat of its possibilities of evil by the united action of the more intelligent and sensible portion of the population. That such is possible is shown by experience in this country, where there is no general law on the subject, and in many parts of which there are no special laws, yet, general public opinion and occasional smallpox panics, have made vaccination general by a sort of common law. Almost everywhere also, school authorities demand vaccination certificates of their pupils, and if, as stated, the English law only affects infants, it would seem possible that some regulations of this kind, at least in the higher grade schools, might be practicable to some extent also in England.

That something is being done we have the evidence of the dispatch quoted. It is said that school boards are enforcing an article in the education code requiring that all candidates for appointment as pupil teachers shall have been vaccinated, that a vast majority of householders are requiring vaccination of their domestic servants, that the trustees of the great Peabody bequest have demanded that their tenants, over 5000 families, shall have their children vaccinated, that many insurance and benefit societies are making vaccination a requirement, and that the practice bids fair to became general. As England is a country of landlords, and one where, as TAINE estimates, more than half the population are in one way or another in domestic service, it would seem possible to practically nullify the act to a very large extent, leaving unfortunately, however, a certain contingent with seriously threatening possibilities until the present vaccination law is repealed, which it is hoped is probable in the near future. In the meanwhile, evil enough may be done to give the advocates and legislators of the present measure some unpleasant reflections in case they come to their senses and have any conscience left.

It is said that the leading anti-vaccination agitator is about to come to this country on a missionary trip on behalf of the anti-vaccination fad. That he will secure some adherents is to be naturally expected, but he will be unable to do the damage he and his coadjutors have effected in England, as any general legislation on the subject affecting the country as a whole is apparently impossible. The day of the anti-vaccination agitator will soon be past in England also, judging from the amount of evidence that is reported as pouring in to show the absolute uselessness and harmfulness, not to call it idiocy, of the recent act. A well-developed smallpox epidemic would be a

national calamity, but it will be, if it occurs, an object-lesson that will be heeded in the future.

RUPTURE OF THE SPLEEN.

SAVOR[1] describes the case of a thirty-one-year-old woman, who, while in her fifth pregnancy, was stepped upon several times in the left side of the abdomen, by a drunken man. Two hours later she was brought to the clinic, and as there were no specially urgent symptoms discovered, absolute rest was ordered. Fifteen hours later there had appeared some dulness in the left flank, and a couple of hours still later anemia appeared to be developing rapidly, while the dulness in the left flank had increased. These symptoms led to the diagnosis of hemorrhage, due to the rupture of some internal organ, and an operation was immediately undertaken. There was found much blood in the peritoneal cavity, and a long tear in the anterior surface of the spleen, filled with coagulated blood. The spleen was then extirpated, and complete recovery ensued, a healthy child being eventually born. The extirpated spleen was somewhat enlarged; there were several subcapsular hemorrhages, in addition to the tear already referred to, and also a larger extravasation which had caused a protrusion and a threatened secondary rupture of the capsule.

From this brief sketch it may be concluded that the blunt trauma, which left no external marks, caused a crushing of the deeper tissues of the spleen, with rupture of large blood-vessels, the hemorrhage taking place into the splenic tissue, the pressure of which, together with other factors, stopped it for a time. Soon the hemorrhage began again, the capsule could no longer resist the pressure, but ruptured, and free hemorrhage took place into the peritoneal cavity.

The literature contains a number of observations that point to this course of events. ROKITANSKY observed in cases of rupture of the spleen that not infrequently the capsule was lifted up from the parenchyma, the space between being filled with blood. In TRENDELENBURG'S case, which was operated on sixteen and one-half hours after the injury, the capsule was lifted up quite extensively, and at the hilus was a large transverse rupture of the anterior margin. In the case described by SAVOR the spleen was somewhat enlarged—another observation pointing to the fact that there is a certain degree of enlargement of the spleen in pregnancy. This enlargement may be looked upon as favoring traumatic rupture, because there are a few cases recorded of spontaneous rupture of the spleen during pregnancy. The diagnosis of traumatic rupture of the spleen is a difficult one. The localization of the trauma, the signs of internal hemorrhage, the increase of the dulness of the spleen without any change of position, are some of the diagnostic signs. The first two are the most convincing. If there is no change in the dulness on altering the position of the patient this only proves that coagulated blood has collected in the left flank, but it does not show where it came from; and if the dulness changes, then this does not speak against rupture of the spleen because the blood may be fluid. The treatment of traumatic rupture of the spleen is splenectomy. Suturing of the tear has been often recommended, but so far it has been performed only once, and with unfavorable results. The sutures would be liable to tear out, for the same reason as we observe the rupture of the capsule of the spleen secondary to hemorrhagic extravasation into the spleen substance. Extirpation of the spleen, the seat of traumatic rupture has been done in eight cases (this number includes only the subcutaneous ruptures, not those which were due to penetrating wounds). SAVOR'S case is the ninth case, and his is the first case of extirpation of ruptured spleen during pregnancy. Splenectomy has 66.6 per cent. recovery. The three first cases terminated in death, but the last six cases recovered. Three cases were operated on shortly after injury, that is to say, two or three hours later. Two of these died and one recovered. Five cases were operated upon between ten and sixteen and one-half hours after the injury, and four recovered. In one case the spleen was removed five days after the injury, with recovery. In two fatal cases the spleen was extensively disintegrated, so that a very severe hemorrhage had taken place. Unfortunately it is probable that the majority of cases of splenic rupture belong to this category, because VINCENT[2] has shown that of seventy-seven instances, fifty-eight died within from two to twenty-four hours, and forty-one of these died within the first two hours. But even such dangerous ruptures with large primary destruction may be successfully operated upon, as shown by the case of PITTS and BALLANCE[3]. The cases of primary splenic hematoma with secondary rupture of the spleen are therefore those which offer the chance for a reasonably certain diagnosis, as well as for successful operation. The nature of these cases demands the most careful and continuous observation of the patient after the injury. In SAVOR'S case the removal of the spleen did not seem to have any unfavorable influence upon either the mother or the child.

[1] Centralbl. f. Gynäkologie, 1898, No. 48.

A NEW SYMPTOM OF SOME CEREBELLAR TUMORS.

In his monograph on "Tumors of the Brain," in Nothnagel's *Special Pathology and Therapy*, Vol. ix, Oppenheim makes the statement that the duty of the clinician is not ended when he has diagnosticated an intracranial neoplasm, but he must go further and determine its precise situation in order to furnish a basis for prognosis and treatment. In pursuance of this thought Schmidt (*Wiener klinische Wochen-*

[2] London Lancet, Feb. 22, 1896.

[3] Revue de Chirurgie, 1893.

schrift, Dec. 22, 1898, p. 1170) reports two cases of cerebellar tumor presenting symptoms of increased intracranial pressure, especially vomiting and vertigo, when the lateral decubitus was assumed. The one case occurred in a woman, 24 years old, in the eighth month of her third pregnancy, whose parents had been tuberculous and who had herself been rachitic and had suffered from measles and articular rheumatism. For several months there had been headache, especially occipital, sometimes radiating to the forehead. For a month there had been vomiting, both after the ingestion of food and independently, but especially on assuming the right lateral decubitus. The vomiting was preceded by some headache and followed by exhaustion. For three weeks the patient had been in bed and took no interest in her surroundings. Memory had failed. On account of the vomiting and headache, premature labor was induced, with transitory amelioration of the symptoms named. The pupils were full, but reacted tardily. The urine contained albumin. The optic nerves were inflamed and the seat of hemorrhages at the papillæ and the maculæ. There was infrequent closure of the lids, divergence of the visual axes, rigid fixation of the eyes, lateral nystagmus and injection of the conjunctiva of the left eyeball. Tapping of the head, especially in the right parietal region, as well as rotation of the head, induced pain. The skin of the chest was hyperesthetic. *Taches cerebrales* were marked, and slight opisthotonos existed. Respiration was irregular and abnormally slow. Marked general hyperesthesia developed. There was, at first, increased irritability of the facial muscles on the right side, which was followed later by paresis. In the further progress of the case, there developed bilateral abducens paresis, loss of knee-jerks, biceps-jerks, and triceps-jerks, slight ataxia and weakness in the left upper extremity, alternate incontinence and retention of urine, left-sided labial herpes, dyspnea, cyanosis, and finally pulmonary edema, leading to death six months after the appearance of the first symptoms. During much of the time the patient lay upon her left side, with the thighs flexed. At no time were febrile symptoms present. Upon postmortem examination a tumor of the left cerebellar hemisphere was found that proved on histologic examination to be an angiosarcoma.

The second case occurred in an unmarried seamstress, 25 years old, with a history of rachitis and of some injury of the vertebral column leading to scoliosis, who, fourteen months before coming under observation, while in the fourth month of pregnancy, was seized with vomiting of progressive intensity, which did not diminish after delivery. The vomiting recurred in attacks about twice weekly, being preceded by tinnitus aurium, and if the former did not set in at once the patient was compelled to arise from bed, though under these conditions a drawing sensation was felt in the abdomen and was soon followed by vomiting. The patient related that she had formerly had diplopia. For three months there had occurred daily attacks lasting from five to fifteen minutes, in which the woman was seized with some pain in the parietal region, followed by pain in the nape of the neck and contraction of the muscles in this situation. Sometimes, though not always, the attacks were attended with vomiting. Headache was present daily with slight intermissions. Walking was difficult, being attended with vertigo. For a short time there was improvement, but the symptoms returned, together with diplopia. Roaring in the ears was almost constant. The patient occupied the right lateral decubitus, maintaining that the left lateral position was attended with vomiting, vertigo and tinnitus aurium. Tapping of the head occasioned no pain, although pressure on the mastoid process on either side did. When the eyes were rotated far outward distinct nystagmus appeared; when the eyes were rotated upward it was only suggested. The right eye appeared somewhat turbid. Choked disc was present on either side and the corneal reflex was diminished. On innervation of the orbicularis oris the right nasolabial fold appeared the more pronounced. A subjective sense of heat in the face and mouth existed. Flexion and extension of the neck, as well as rotation, were painful. The upper portion of the dorsal segment of the vertebral column was tender on pressure. The abdominal reflex was enfeebled, the knee-jerks pronounced. The pupils were at times full, at other times narrow; sometimes they reacted to light, sometimes not; sometimes the right, sometimes the left, was the larger. The attacks recurred from time to time, although for a short period there was temporary absence of the symptoms. In some attacks the pulse was slowed, in some the respiratory frequency, and sometimes sweating occurred. Paresthesia was present on the left side of the face and tongue and was followed later by anesthesia. The left corneal reflex became enfeebled. Death resulted finally from respiratory failure, nearly two years after the appearance of the earliest symptoms. Postmortem examination disclosed the presence of a cystically degenerated glioma in the right cerebellar hemisphere, obstructing the aqueduct of Sylvius and giving rise to internal hydrocephalus.

A careful analysis of the symptoms presented by the two cases here briefly described in outline would seem to demonstrate that the occurrence of symptoms of increased intracranial pressure, especially vomiting and vertigo, on the assumption of the lateral decubitus is indicative of the existence of a tumor of the opposite cerebellar hemisphere of considerable size and close to the median line. These phenomena are probably attributable to obstruction of the aqueduct of Sylvius and pressure on the great veins of Galen from change in the position of the growth.

SANITARY PRECAUTIONS IN CUBA.

The War Department seems to be thoroughly alive to the dangers which threaten our troops in their occupation of Cuba during the coming summer and autumn. The prevalence of yellow fever, as of all infections, is proportioned to the number of susceptible individuals exposed during the period when the climatic and local conditions are favorable to its spread. The medical records of the Spanish troops are instructive in this regard. In the calendar year 1896, when so many recruits and new regiments arrived from Spain to increase the military strength of the island, two-thirds of the deaths which occurred among the troops were due to the infection of yellow fever, or 6610 deaths in a total of 10,191 deaths. On account of the presence of so many susceptible individuals, deaths from yellow fever occurred during every month of the year, March and April having the smallest numbers, 74 and 86 respectively, and October and November the largest numbers, 1063 and 1214 respectively. During the following year, 1897, when a large proportion of the troops had become immune by reason of a previous attack, only about 4 per cent. of the total number of deaths were the result of yellow fever, or 563 deaths in a total mortality of 14,718. During both years the fever was more prevalent in the period July to December, inclusive, than in the period January to June, inclusive.

To protect our troops as much as possible from experiences of this kind the War Department sent a board of officers, the Medical Department being represented thereon by Lieut.-Col. R. M. O'REILLY, chief surgeon, volunteers, to investigate the measures taken by the British authorities for the protection of their garrisons in Jamaica. We have not seen the report of this board, but we understand that isolation of the non-immune troops, in barracks built at an elevation of three or four thousand feet above the sea level and some miles distant from the localities liable to be infected is the measure on which the main reliance is placed. Inspector-General J. C. BRECKINRIDGE is under orders for the West Indies with several points specified for his investigation: 1, as to the changes which it is desirable to have made in the ration in view of its use in tropical climates; 2, as to the kind of clothing best suited for the use of the troops garrisoning the islands; 3, as to the character of the shelter to be provided, and, lastly, as to changes in the Army Regulations, sanitary orders and circulars, etc., which may seem to be called for in view of the changed environment of the troops.

The Army ration is a most liberal one. It suffices for men under conditions of active service and of extreme cold; it must, therefore, be sufficient under conditions which call for the expenditure of less energy. But the criticism is frequently made that the regulation ration provides more of the hydrocarbons than is needful in tropic climates and that these articles might with advantage be reduced in quantity, and the carbohydrates correspondingly increased. While this may be granted as true, there does not appear to be any need to alter the composition of the ration until an extensive experience has shown just what changes are assuredly desirable, for the system of rationing in our army places the ability to vary the diet within wide limits in the hands of local commanders. Because bacon is one of the components of the ration it does not follow that the men must eat the bacon or go hungry. Those articles of the ration which are not used by the men are credited to them, and the money values of these regulation articles can be used for the purchase of such other articles as are considered to be desirable under the conditions.

As to the kind of clothing for tropic climates, cotton or linen for outer garments is certainly better than woolens during the hot period of the day; but a warm woolen blouse is a good thing for the soldier to have as a protection against the chills after nightfall, particularly when the undergarments are damp from perspiration. For undershirt and drawers, light-weight woolen or woolen mixtures are preferable to cotton or linen, as these become so cold and chilly when wet.

Surgeon-General STERNBERG's recent visit of inspection to Havana and other points in Cuba appears to have settled the general question of shelter for the troops, for in a communication, dated Jan. 17, 1899, to the Adjutant-General of the Army, he states that after the first of May, and possibly before that date, we have every reason to expect a considerable increase in the amount of sickness among our troops stationed in Cuba. The so-called rainy season is from May to September, and it is the general opinion of physicians who have practiced in the island that troops should be sheltered in barracks of some kind during this season, and that a large amount of preventable sickness may be expected if the troops are obliged to pass through the unhealthy season in tents. In the interior, malarial diseases, diarrhea and dysentery prevail in many of the localities to which troops have been ordered. Yellow fever also prevails occasionally at some of the interior cities and it is endemic at most of the principal seaport cities of the island, the season of prevalence being from May to December. In the opinion of the Surgeon-General it is very important from a sanitary point of view that troops remaining in Cuba during the unhealthy season should be quartered in barracks rather than in tents. In certain places the barracks formerly occupied by the Spanish troops, after being thoroughly disinfected and repaired, will answer the purpose admirably; in other places it will probably be necessary to build temporary frame barracks; in certain localities it may be practicable to use private houses or public buildings; suburban villas and country houses are sometimes of such dimensions

that they may be used as barracks for one or more companies. He, therefore, urges that prompt action be taken with reference to the shelter of the troops to remain in Cuba in order that this may be accomplished before the first of May.

The character and extent of the changes desirable to be made in Army Regulations with the view to lessen sickness and promote discipline among the troops serving out of the United States is a subject which is veiled in obscurity at the present time on account of our ignorance of the local conditions at the various new military stations. There is therefore reason to anticipate that the mission of Inspector-General BRECKINRIDGE will be productive of valuable additions to our knowledge of unsanitary conditions and their rectification.

AUTO-INTOXICATION.

The repeated observations that in the various infectious diseases toxins were produced by extrinsic bacteria, which toxins were in the main responsible for the symptoms, caused pathologists and clinicians to direct their attention to the bacteria normally present in the body, particularly in the intestinal canal. These observations amply repaid them, indeed almost too well, when we consider that it is about as common now to ascribe obscure symptoms to auto-infection as it was formerly to a touch of malaria; although that latter idea has not yet been entirely dispelled from the professional mind. Nevertheless, all are now convinced that auto-intoxication does play a most important rôle in many troubles as yet but little understood. Looking at the subject from its present aspect, which covers a much larger field than formerly, auto-intoxication may be regarded as including several different processes: The effects of toxins that are manufactured within the economy either as the result of normal or of abnormal chemic activity; toxins stored up in the body as the result of some interference, total or partial, with organs that produce substances which are essential to the maintenance of health, as for instance, the thyroid gland, the congenital absence of which occurs in the disease known as cretinism; while the total extirpation or total abolition of function, as by tumor, is followed by myxedema, both affections that in one sense may be regarded as the results of auto-intoxication; thirdly, the germs that invade the intestinal tract and other portions of the body produce toxins that may be taken up into the general system. In addition, ALBU adds the auto-intoxications that take place where there are metabolic processes not specifically located, as in gout and rheumatism; auto-intoxications that occur as the result of the retention in the body of substances produced by physiologic metabolic changes, which substances ought to have been excreted, as for instance, death or the manifestation of toxic symptoms occurring when a large area of skin is destroyed, or the production of uremia when the kidneys are unable to functionate properly and allow to accumulate in the body poisons that in their healthy condition would be readily excreted; auto-intoxications dependent upon "the over-production of physiologic and pathologic products of the organism," such as is manifest in diabetic coma, and particularly in acetonuria. Under this latter heading, too, may be placed that very prolific source of auto-intoxication, the gastro-intestinal tract. In the intestinal canal auto-intoxication results from the delay in the canal of the food taken in, and the subsequent fermentative and putrefactive changes that ensue. Not always is constipation necessary for this intoxication, however, as for example, in cholera, where toxins are being continuously absorbed, regardless of the diarrhea that is draining the life of the patient; yet coprostasis is the rule in these cases. When fermentation of carbohydrates ensues, we have produced the various fatty acids, while with the decomposition of the albuminous substances, ammonia, sulphuretted hydrogen, indol and skatol, leucin and tyrosin, and some other products are the results. AARON and others have shown that there is a constant formation of ptomains and toxins in the intestinal canal by bacterial action. The retention of all these injurious products would naturally, if absorbed—and experiment has proved that this absorption does take place—work harmful changes in all parts of the body. The nervous system, being the most delicately organized, is usually the first to suffer. While we do not know positively that such is the case, yet reasoning from the fact that a cleaning out of these poisons, i. e., of the intestinal tract, often causes a prompt disappearance of the symptoms, we have at least strong presumptive evidence. The kidneys, if not functionating properly, are also a most important factor in the production of auto-intoxication. BOUCHARD states that in the normal urine of an adult man there is present each day a sufficient quantity of several poisonous products he has himself isolated, to have caused the death of the individual if not excreted. We can readily determine from this how small an amount of kidney disturbance may be required to produce symptoms that might be classed with those of auto-intoxication. In this instance, as in the intestines, the nervous system suffers the most, afterward the circulatory, the tegumentary, and finally, the kidneys themselves.

Among nervous symptoms, probably the most common is headache. Almost all of us are acquainted with it, and with the relief that follows a thorough evacuation of the bowels. Vomiting of the so-called cerebral type occasionally occurs. Among psychic symptoms, disinclination to work, a distaste for society, depression of spirits and melancholia, are all of the most frequent occurrence. Neurasthenic symptoms are often present, and we must now look upon these symptoms as frequently secondary to the auto-intoxication, not the reverse, as has heretofore been

supposed. We all recognize the influence that extrinsic poisons, alcohol, nicotin, lead, and others have in the production of severe affections of the nervous system, as mania, epilepsy, insanity. The question naturally arises: If these poisons are capable of so serious results, are not the poisons developed in the body just as liable to produce corresponding deleterious actions? At any rate, careful examinations of urine in the above states, in which no other causes have been found, have demonstrated that in almost all cases the urine is greatly increased in toxicity—a most significant fact to say the least. Among circulatory disturbances may be mentioned tachycardia, and other forms of vasomotor alteration. Skin affections are not uncommon as the result of auto-intoxication. The occurrence of urticaria as the result of the ingestion of certain foods, particularly lobsters, strawberries, and tomatoes, while at one time ascribed to idiosyncrasy, we now know to be due to auto-intoxication, for in so-called susceptible individuals, the urticaria has been prevented by keeping the intestinal canal free and active. Albuminuria may occur as a result of auto-intoxication: in the various forms of acute and chronic intestinal obstruction, the exit of toxins being prevented along the *prima via*, they are absorbed and finally excreted to a considerable extent by the kidneys, on which latter they exert their poisonous action. We can readily see that albuminuria might result, or even an acute nephritis. Lastly, we must regard chlorosis as due to a large extent to auto-intoxication. "Sir ANDREW CLARK believed that constipation plays an important rôle, and the condition is really a copremia due to absorption of poisons, leucomains and ptomains, from the large bowel" (OSLER). In the treatment of this disease, too, while we must pin our faith to iron, all authorities insist on the necessity of keeping the bowels moving freely; indeed, Sir ANDREW CLARK was so imbued with the idea of the importance of constipation, or as we now know, of auto-intoxication in the etiology of this disease, that he declared "that if limited to the choice of one drug he would choose a purgative."

CORRESPONDENCE.

Appendicitis: A Criticism.

SAN FRANCISCO, CAL., Jan. 5, 1899.

To the Editor:—It seems unfortunate to find articles published in an up-to-date medical journal which may lead to serious loss of life by misinforming a number of the younger members of the profession, and giving them a feeling of false security in being able to invariably cope with a disease like appendicitis, by medicinal means alone. I refer to an article in the *Medical Record* of Dec. 17, 1898, by T. J. Hutton, M.D., of Chicago, entitled "A Cheap Cure for Appendicitis," in which the author claims to cure all cases of appendicitis by giving the patient a calomel and bicarbonate of soda purge. I do not like to open up the old controversy as to whether appendicitis is a surgical disease or not, but I can not let go unchallenged such wild statements as the worthy Doctor makes in the article in question. The gentleman claims to have been practicing medicine twenty-seven years, and yet has never seen a case of appendicitis which required operation. Either he has had a very peculiar run of cases, or else is a poor diagnostician. He states that, in his experience, "appendicitis and all other bellyaches for which men now operate are promptly amenable to proper medical treatment." This statement is too ridiculous to necessitate a detailed reply to all its phases. Does the Doctor cure all his cases of intussusception and volvulus with calomel?

With regard to his curing appendicitis by purgation and hot applications, I must admit that there are a few cases of slight catarrh of the appendix which may be cured by this method. Dr. J. B. Murphy of Chicago removed the appendix from one patient who had been cured (?) twenty-one times before the Doctor operated on him. From Dr. Hutton's description of the cases which he has treated by his infallible method, it appears to me that the Doctor calls all his cases of bellyache, "appendicitis." The Doctor is evidently not familiar with the ordinary symptoms of the malady, and usually allows the patient to make a diagnosis for him. The ridiculous position in which the Doctor places himself is clearly shown by examining the pathology of this disease.

As I pointed out in a paper read before the San Francisco County Medical Society, February, 1898, the cases may be divided into two classes: those in which the disease is confined to the mucous membrane, and those in which it has extended through the wall of the appendix and involved the peritoneal coat. Everyone will admit that a certain number of cases of the first class will get well and have no recurrence, whether they are treated or not; another portion will have recurrent attacks which may eventually render the patient's life so miserable that the removal of the offending organ is imperative. In the second class of cases, in which the peritoneal coat of the appendix is involved, whether it be by the extension of an ulcer or by pressure necrosis of an appendolith, or by gangrene due to the cutting off of the circulation, we are immediately confronted by a condition which demands the opening of the abdomen to prevent its extension of the disease to the general peritoneal cavity. While nature is often kind enough to temporarily wall off the diseased area and give us time to prepare for an operation, we are still compelled to evacuate the pus which invariably accumulates in these cases, or nature will attempt to do so for us, usually with disastrous results. In two cases which came under my notice, where the patients had been pronounced cured by their respective physicians, the abscesses which had formed ruptured into the general peritoneal cavity, with immediately fatal results. Cases in which concretions are present—and I find that they occur in about 50 per cent. of my operative cases—are unquestionably surgical from the beginning, and I doubt that even Dr. Hutton will admit that calomel will extract a stone from the peritoneal cavity, and close the hole in the appendix, through which it got out. If the Doctor will hunt up a little in the voluminous literature of appendicitis, he will find that the physician has not yet been discovered who could determine positively whether in a given case the disease was confined to the mucosa, whether a calculus was present, whether the disease was amenable to medical means alone, or whether the immediate removal of the appendix offered the only hope of recovery, and until such time as we can definitely tell which condition is present, we are justified in treating all cases as though they were the most dangerous form, and by a simple operation place our patient out of danger not only for the present, but for the future.

I will admit that I would personally prefer to trust to the tender mercies of *vis medicatrix natural*, than to the hands of some gentlemen styling themselves physicians and surgeons who do not know the first principles of surgery, and who have had

patients die from their faulty technic. These gentlemen are prone to condemn surgical measures on account of their own inability to obtain good results by those means, but when we look over the results of our clean operators, and find that practically all cases recover and are cured, when the surgeon has had the case from its inception, we must admit that a properly performed operation for the removal of the diseased appendix is comparatively harmless. The fatal results following properly conducted operative procedures are almost invariably due to having too long delayed the opening of the abdomen, while we do find a few cases which are fulminating from the start, and in which nothing can avert the fatal issue.

There is no question but that a number of operations have been performed in which the appendix has been found comparatively free from disease. These cases illustrate the necessity of being able to make a diagnosis before attempting treatment. I have seen a number of cases in which I was called to operate for appendicitis which did not show any of the characteristic symptoms of the disease, but proved to be either an impacted cecum, typhoid fever, colitis, passing of renal or biliary calculi, or extra uterine pregnancy. I have also been called after the patient had been treated by the attending physician with calomel, castor-oil, epsom salts and even croton-oil to relieve an obstruction of the bowels, due to adhesions around an appendiceal abscess; of course, a correct diagnosis had not been made and the patients usually succumbed to the improper treatment. Operations in these cases would have been followed by recovery and cure if done early in the disease.

It will be noticed that I distinguish between an actual *cure* and a failure to die; there is a material difference, and the unfortunate patient who has been treated by the calomel method is not cured except in a few cases, the majority having recurrances, which, while they rarely terminate fatally, render existence so miserable that an operation is sought after to get rid of the offending organ.

I think that if Dr. Hutton would familiarize himself with the etiology, pathology and symptoms of appendiceal disease, he would discover that the cases which he has been curing with calomel were not appendicitis, but cases of constipation which needed a mercurial purge. Furthermore, if the Doctor will take the trouble to witness several operations for the removal of diseased appendices, he will come to the conclusion that calomel is incapable of freeing adhesions or causing the absorption of infectious pus or removing any foreign body which is not within the lumen of the intestines.

I am sorry to have to take up the space of any medical journal to answer a paper of this caliber, but it is unwise to allow any such article to stand before the profession without criticism, as the titles of its author would certainly have some weight in convincing a number of medical men that they had an infallible panacea for all abdominal pains, regardless of their origin.

I trust that I have made clear the utter absurdity of such views. J. Henry Barbat, M.D.

Homing Pigeons as Medical Messengers.

Elizabeth, Ill., Jan. 7, 1899.

To the Editor:—Readers of the Journal of the American Medical Association will find my former article on "Homing Pigeons as Medical Messengers" in the Journal of March 31, 1898 (p. 872). Though much interest was manifested in the subject at the time, not many doctors to my knowledge undertook to secure for themselves the service of these wonderfully clever aerial messengers. I can now speak with more assurance that they are indeed feasible. I receive messages from my patients in the country every day, in addition to my daily visits to them. My plan usually is to leave a pigeon the day I make a visit and direct that the pigeon be liberated the next morning about 8 o'clock, with such a message as I may desire, e. g., the record of temperature, pulse, number of stools, etc. With a little care in the instruction of the nurse, I am quite well informed of the condition of my patient before I start to make my next visit, just the same as the doctor becomes informed of his hospital patient, by first examining the record of the patient kept since his last visit. In a country practice this is even more important, as it enables the doctor to judge what will be needed for his patient the next twenty-four hours, for we country doctors must act as our own druggists. Then again, country doctors can not often make more than one call in twenty-four hours, and by an aerial messenger service he can get practically the same information as the doctor in city or hospital practice, who makes several calls, by simply leaving two pigeons and getting an evening and morning report. The doctor who has a country practice is often called from his country patient to other persons sick in the neighborhood. This will make him late in getting back to his office, and it will be a great convenience if he can send this information home, practically with the same speed as the city practitioner through the medium of the telephone system. That we can remain in closer touch throughout an illness of our country patients, there can remain no doubt, a fact that will be appreciated by most patients and their friends.

Further information concerning homing pigeons as medical messengers will be cheerfully furnished by the writer on receipt of a stamped and addressed envelope. But I would suggest that physicians wishing to take this matter up in earnest and receive benefit and pleasure from these aerial messengers, first of all purchase only the best kind of Belgian homing pigeons, one or two pairs well mated. No reliance can be placed in young birds shipped to you, for message carriers. The young birds must be hatched from your own loft. The old birds that you secure for breeding must not be given their liberty until they have hatched one or two broods from your own loft. The youngsters, at a certain age, can be trained as stated in my former letter. Fraternally,

Philip Arnold, M.D.

ASSOCIATION NEWS.

Section on Ophthalmology. Dr. Edmond Landott of Paris, the well-known ophthalmologist and author, has accepted the invitation of the Section on Ophthalmology to give an address before that body in Columbus next June. Dr. Landott has chosen the title: "Some Disturbances of the Ocular Movements."

Among other arrangements is a joint session with the Section on Otology and Laryngology, that will occupy the whole morning of the second day. The subject for discussion is "The Relation of Ocular Diseases to Affections of the Nose and Neighboring Cavities." It will be introduced by an address from Dr. Charles Stedman Bull of New York, on "Some Points in the Symptomatology, Pathology and Treatment of the Sinuses Adjacent and Accessory to the Orbit," followed by Dr. Bryson Delavan of New York, on "Nasal Stenoses in their Relation to Ocular Disturbances"; Dr. J. A. White of Richmond, Va., "Eye Troubles Attributable to Nasopharyngeal and Aural Diseases"; and Dr. J. H. Bryan of Washington, "Diseases of the Accessory Sinuses in their Relation to Diseases of the Eye." Three Symposia: "Sympathetic Ophthalmia," "Diagnosis and Treatment of the Rarer Forms of Ametropia," and "Chronic Glaucoma," have been also arranged. For the greater convenience of members who desire to attend sessions of both sections two commodious and adjoining halls have already been secured on the second floor of the Y. M. C. A. building in Columbus. A preliminary program furnishing further details of these and other matters will be published in April.

SOCIETY NEWS.

Muskingum County Medical Society.—At the January meeting of this Society, Zanesville, Ohio, J. G. F. Holston discussed hypnotism.

El Paso Medical Society.—The election of officers of this Society, at Colorado Springs, Colo., recently, resulted as follows: President, W. F. Martin; vice-president, Gerald Webb; secretary-treasurer, Dr. Reddie.

Medical Research Club.—At the meeting, January 25, at the Cincinnati Medical College, Dr. Alfred Friedlander read a paper on "Rarer Tumors of the Kidney, Microscopic Specimens," and Dr. Henry Bettman one on "Some Gross Stomach Specimens."

Cuyahoga County Medical Society.—At the recent meeting in Cleveland, Ohio, this Society chose the following officers for 1899: President, Howard S. Straight; vice-presidents, Charles F. Hoover and B. O. Coats; secretary, R. J. Wenner; treasurer, F. C. Taylor.

Washington Microscopical Society.—The January meeting of the Society was held January 10. Dr. Bartsch read a paper entitled "Slime Molds of the District of Columbia," and presented a large number of microscopic slides from the gross specimens presented.

Cincinnati Academy of Medicine.—At the meeting of January 12, Dr. B. F. Lyle read a paper on "Hemoptysis," and at the meeting of January 16, a review of Dr. William Beaumont's Experiments on Alexis St. Martin, with a photograph of the house and a description of the room in which the latter was wounded, was presented by Dr. S. C. Ayers, and "Modern Views of the Physiology of Gastric Digestion," by Dr. B. K. Rachford.

New York County Medical Association.—The annual election, January 16, resulted as follows; President, Frederick Holme Wiggin; vice-presidents, Parker Syms and Edwin Gaillard Mason; recording secretary, Ogden C. Ludlow; corresponding secretary, Charles E. Denison: treasurer, John H. Hinton; executive committee, members for three, two and one year respectively, George Tucker Harrison, Francis J. Quinlan and John Shrady.

Central Texas Medical Association.—At the eleventh annual session of this Association, held at Waco, Texas, a paper entitled "Has Ergot a place in Obstetric Practice?" by R. C. Fisher of Bilton, was presented, also one on female insanity, by J. M. Fort of Paris. F. D. Thompson and E. D. Knapp of Fort Worth also read papers, and J. W. Hale of Waco discussed "Dislocations." The following are the officers elected: Marven L. Graves of San Antonio, president; J. C. J. King of Waco, vice-president, and N. A. Olive of Waco, secretary.

Philadelphia Medical Club.—The quarterly meeting of the club was held January 13, and the following officers were elected: President, J. M. Anders; first vice-president, C. W. Burr; second vice-president, George E. de Schweinitz; secretary, Guy Hinsdale; treasurer, John W. Lock; members of executive committee, Drs. Ernest Laplace, T. Chalmers Fulton, H. Augustus Wilson and G. W. Crosky. The question of a permanent club-house was discussed, but no definite action was taken.

Ninth International Congress of Ophthalmology.—This Congress will be held at Utrecht, Aug. 14, 1899. A large attendance is anticipated. There will be three sections: 1, anatomy, pathologic anatomy and bacteriology; 2, optics and physiology; 3, clinic and operative methods. English, French and German are to be the official languages. The Committee of Organization consists of D. Argyll Robertson, president of the last Congress, held at Edinburgh in 1894; G. A. Berry; Prof. M. E. Mulder of Gronigen; Prof. M. Straub of Amsterdam; Prof. W. Koster of Leyden, and Prof. H. Snellen of Utrecht. The membership fee is 25 francs. Apply to Prof. H. Snellen of the University, Utrecht, Netherlands, for further particulars. He requests members to inform him as early as possible in regard to the communications they intend to present, and whether members are to be accompanied by ladies, and also which language they prefer for the discussions.

Washington Obstetrical and Gynecological Society.—The 291st meeting of the society was held at the residence of Dr. Samuel S. Adams, January 6. The paper of the evening was read by Dr. E. E. Morse, entitled "Leucorrhea in Women." A discussion followed, participated in by Drs. Cook, Stone, J. T. Johnson, H. L. E. Johnson and E. A. Balloch. Dr. J. T. Johnson presented a breast which he had recently removed from a negro patient. The gland contained a large mass or growth, and was referred to the Microscopic Committee for report. He also presented a small ovarian growth with the accompanying tube, which he removed from a white patient. Dr. Stone presented a fibroid tumor for which he had performed a hysterectomy, the patient dying within two weeks, from embolism; he also presented a very interesting ovarian tumor which was intimately adherent in the cavity of the pelvis. The patient died from uncontrollable hemorrhage at the close of the operation.

Orleans Parish Medical Society.—The annual meeting of this Society took place in New Orleans, La., January 14. The reports of outgoing officers showed a prosperous condition; there are on the rolls 163 active and 2 honorary members; thirty original papers were read at the bi-weekly meetings held in 1898; the library comprises 3001 bound volumes, and 479 reprints, all catalogued according to library bureau methods, and receives more than 100 medical publications. During 1898 the Transactions for 1896, 1897 and 1898 were published. Much credit is due the outgoing officers, and especially the retiring president, Dr. John Callan, who has just completed his second year as executive. The following newly elected officers were inducted into office: President, Isadore Dyer; first vice-president, E. Denegre Martin; second vice-president, T. S. Dabney; third vice president, W. Scheppegrell; recording secretary, Hamilton P. Jones; treasurer, J. A. Storck; corresponding secretary and librarian, S. P. Delaup. Mr. E. M. Hummel is assistant corresponding secretary and librarian. The incoming president, in his address, outlined the work to which special attention is to be devoted: ownership of the Society's domicile, the prosecution of quacks and of prescribing druggists' through the Judiciary Committee, the publication of the Transactions, month by month, the introduction of social features, with refreshments, at least on one of the two meetings held each month. The annual orator, Mr. Wm. Beer, librarian to the Howard Library and to the Fisk Free and Public Library, entertained the members with a discourse on the "Relations of Public Libraries to Public Men." Adjournment was followed by a "smoker," with the usual accompaniments suited to the inner man.

Washington Medical Society.—At the stated meeting held January 2, the following officers were elected: President, Samuel C. Busey; vice presidents, G. N. Acker and Z. T. Sowers; secretary, Francis P. Morgan; corresponding secretary, Thomas C. Smith; treasurer, Charles W. Franzoni; censors, S. S. Adams, C. W. Richardson and W. C. Woodward. Notwithstanding the fact that Dr. Busey did not desire re-election, the Society honored him with the office for the eighth term. . . At the meeting of January 11, Dr. Walter E. Wells reported an interesting case of paroxysmal sneezing in a white girl, aged 16 years. The sneezing lasted several weeks. It is estimated that she sneezed 223 times in five minutes and 50,000 times in the day. The patient slept very little at night on account of the sneezing. Various remedies were tried, such as morphin,

chloral, cocain and the actual cautery; the latter seemed to be a curative agent. The cause of the trouble was supposed to be from local trouble and hysteria. Dr. D. S. Lamb gave the history and presented some specimens of typhoid fever and Texas cattle fever. Dr. S. S. Adams presented some specimens of typhoid fever. Interesting discussion followed each topic. . . . At the meeting of January 18, Dr. Lamb presented a specimen of tubercular vasa deferentia and a specimen showing tuberculosis in cattle. Dr. John F. Moran reported three cases of puerperal septicemia successfully treated with antistreptococcus serum. The adminstration of the serum was followed by: 1, lowering of temperature; 2, reduction of pulse; 3, diaphoresis and diuresis. He said the serum was of value in true septicemia, but not indicated in sapremia, where local measures suffice. The paper was discussed by Drs. J. Ford Thompson, Poole, Stone and others. Dr. Moran also reported a case of symphyseotomy for contracted pelvis, the measurements of which were, between anterior superior spines, 21 cm.; between crests of illii, 22 cm.; circumference of pelvis 68 cm. The pubic bones were separated two and one-half inches. The case recovered promptly. This is the first symphyseotomy performed at the Columbia Hospital.

Philadelphia County Medical Society.—At the meeting of January 11, Dr. George Shoemaker read a paper on "Minor Gynecologic Operations." He referred to the beneficial effects which many patients derive from many minor operations upon the genitalia. In those cases marked by a neurotic tendency he thought that the condition primarily arose from a pathologic cause, such as fissure of the anus, which might frequently be overlooked as a causative factor in the production of uncontrollable nervousness, though when the fissure was relieved the nervous symptoms also abated. In malpositions of the uterus, too, he thought, lay a frequent source of harm, and on the correction of this the patient would be restored to usefulness and health. Dr. R. C. Norris said that the general practitioner should be skilled in the diagnosis of these conditions and that much good might be obtained by a simple plan of treatment. In many cases of greater importance he thought, however, that much valuable time might be lost and slight harm ensue from prolonged treatment at the hands of the general practitioner, whereas, if the patient was referred to a skilled gynecologist, he might sooner be restored to health. Dr. Massey concurred in the opinion as expressed by Dr. Norris, that the general practitioner should be a skilled diagnostician, but would not advise that the patient be too quickly transferred to the gynecologist, on account of the prevailing tendency to operate too soon. Dr. J. Madison Taylor, speaking from the standpoint of the general practitioner, thought it was a duty the physician bore to the patient to have the best treatment possible in the quickest manner possible, and he concurred in the opinion as expressed by Dr. Norris. He thought the day was fast approaching when a feeling of trust could be depended upon when the patient passed from the hands of the general practitioner to the gynecologist. J. H. McKee spoke of two cases of measles in which there had been a secondary attack. In one of these it was fully known that the contagion was carried by a third person and for a considerable distance. In both cases Koplik's sign was absent.

NECROLOGY.

Dr. HARLON MCVEY, M.D., a graduate of the Miami Medical College of Cincinnati, Ohio, and afterward assistant-surgeon in the regular army, died at Manila, January 4, from typhoid fever.

JULIUS A. ROTH, M. D., Bellevue, N. Y., 1852, died in New York City, his birth-place, January 15, aged about 40 years. A widow and two children survive him.

TIMOTHY J. MCGILLICUDDY, M.D., N. Y. University, 1882, an active practitioner of New York City, somewhat known for his original contributions to medical literature, died of pneumonia after a short illness, January 17. He was a member of the AMERICAN MEDICAL ASSOCIATION and other scientific bodies.

ARTHUR E. BATE, M.D., Philadelphia, Pa., born in Birmingham, Eng., and graduated from the Jefferson Medical College, is dead. At the time of his death he was on the staff of the Nose and Throat Department of the Jefferson Hospital and a member of the County Medical Society.

T. WILLIAM BIRKEY, M.D., Philadelphia, Pa., died a few days ago of heart disease. He was a graduate of the University of Pennsylvania, class of 1851, and well versed in his profession. He was born in Philadelphia in 1831.

WILLIAM S. FRICK, M.D., Philadelphia, Pa., died recently of pneumonia. He was born in Chester County, Pa., Nov. 19, 1826, and was one of the oldest members of the Alumni Association of the Jefferson Medical College, having graduated from that institution in 1849.

JAMES BECKETT, M.D., Chicago, Ill., was buried January 18. He was born in England in 1854, and came to Chicago in 1891.

STEPHEN HENRY WEBSTER, M.D., Troy, N. Y., died January 6, aged 33 years. He was graduated from the Albany Medical College in 1886 and studied during 1888 in New York and in 1891 in Vienna, Prague and Berlin. He was city physician of Troy one year.

REUBEN J. ALMOND, M.D., Carlinville, Ill., died January 8, aged 81 years. He was graduated from Jefferson in 1839 and practiced in Delaware until 1849, then in Ohio until 1853, when he located in Illinois.

A. H. MITCHELL, M.D., Warm Springs, Mont., for many years a member of the AMERICAN MEDICAL ASSOCIATION, died Dec. 20, 1898, from a tumor at the base of the brain. He was a native of Kentucky, aged 67 years.

WALTER H. MARBLE, M.D., Chicago, Ill., attending physician at the German-American Hospital, died at that institution January 13, of appendicitis. Dr. Marble was a native of Ashburnham, Mass., graduated from Dartmouth College in 1883, and from the Chicago Medical College in 1886.

W. W. COCHRANE, M.D., Atchison, Kans., died January 14, aged 79 years. He was graduated from the Louisville Medical College in 1848, and after practicing in Louisiana and Mississippi for eleven years, removed to Atchison in 1859. He had been a member of the Kansas Medical Society since 1868, and was its president from that year until 1872, and its treasurer from 1872 until 1890.

MYRON N. CHAMBERLAIN, M.D., Cheshire, Conn., died January 10, aged 63 years. He was graduated from Yale in 1857, then entered the Yale Medical School. When the war began he left his studies and enlisted as a private in the 27th Connecticut Volunteers. He was soon after transferred to the medical department and became a regimental hospital steward. At the battle of Chancellorsville he, with many others of the regiment, were taken prisoners. He was almost immediately paroled and he then went on duty in the prisoner's camp at Annapolis, Md. After the war he completed his medical studies and was graduated from Yale Medical School in 1866.

THOMAS D. HOPE, M.D., a medical examiner of the Soldiers' Home at Hampton, Va., died suddenly of cardiac disease, January 20. He was a nephew of James B. Hope, the poet, and a brother of Capt. Geo. W. Hope of the Fourth Virginia Infantry, now with his command at Havana, Cuba.

ALCEE CHASTANT, M.D., Tulane University, New Orleans, La., 1852, died in New Orleans, January 20, aged 63 years. He was a surgeon on the staff of Gen. Braxton Bragg of the Confederate army and at the end of the war a surgeon-major of the Army of the Tennessee.

HORACE BURR, M.D., Wilmington, Del., January 10, aged 82 years. . . Thomas Calbreath, M.D., Cleopatra, Mo., January

9. . . B. D. Copp, M.D., Menomonie, Wis., Rush Medical College, 1871, January 11. . . Atteson M. Haven, M.D., Pennellville, N. Y., January 7, aged 42 years. . . A. S. Hyatt, M.D. Lansing, Mich., January 12, aged 38 years. . . Charles Hunter, M.D., Colorado Springs, Colo., January 14. . . Robert A. Irwin, M.D., Sisterville, W. Va., January 14, aged 29 years. . . William M. Miller, M.D., Findlay, Ohio, January 14, aged 80 years. . . J. H. Nichols, M.D., Wapakoneta, Ohio, January 9, aged 55 years. . . H. De V. Pratt, M.D., Elmira, N. Y., January 12, aged 42 years. . . George W. Thompson, M.D., Mt. Union, Pa., January 4, aged 85 years. . . William Youker, M.D., Belleville, Ont., January 12, aged 52 years.

DEATHS ABROAD.

ALFREDO A. KANTHACK, professor of pathology Cambridge University, died Dec. 21, 1898, aged 36 years. . . Prof. A. Laboulbéne, Paris, aged 74 years. He occupied the chair of history of medicine, but was chiefly distinguished for his entomologic research and its application to the etiology of diseases. . . Dr. W. Narkiewicz-Iodko, professor of ophthalmology, Medical Faculty of Warsaw. . . Dr. Gluge, emeritus professor of physiology, University of Brussels, aged 86 years. . . Dr. C. Eloy, Paris, editor of the *Journal des Praticiens*, aged 50 years. . . Dr. Hubert Boëns, Brussels, editor of *Le Médicin*, president of the International Anti-vaccination League, aged 73 years. . . Dr. H. Lotar, professor of pharmacy in the University of Lille, aged 62 years.

BOOK NOTICES.

Transactions of American Climatological Association. Vol. xiv. Cloth. Pp. 243. Illustrated. Philadelphia: 1898.

This volume contains minutes of the meeting held at Maplewood, N. H., in August, 1898. The following papers are included: "Auenbrugger and Laennec, the Discoverers of Percussion and Auscultation"; "Common Errors of General Practitioners in Dealing with Pulmonary Tuberculosis"; "Suggestions, the Result of Recent Experiences with Phthisic Patients"; "Value of Systematic Physical Training in Prevention and Cure of Pulmonary Tuberculosis"; "Pretubercular Stage of Phthisis"; "Note on Position of Lower Border of Heart"; "Dissecting Aneurysm of Aorta Rupturing into Pericardial Sac"; "Asthma and its Treatment"; "Ergot in Chronic Malaria"; "Clinical Uses of Roentgen Light"; "Inhalation of Oxygen in Acute Affections of the Lungs"; "Sanatoria and Special Hospitals for Poor Consumptives"; "Distribution of Tuberculosis in New Jersey"; "Definite Records of Physical Signs"; "Variations in Pathogenic Activity Among Tubercle Bacilli"; "Infection from Hands in Phthisis"; "Virulency of Sputum Kept Many Months"; "Sero-Therapy in Tuberculosis"; "Climatology of Nudity: Partial and Complete."

The Treatment of Wounds: Its Principles and Practice, General and Special. By LEWIS STEPHEN PILCHER, A.M., M.D., etc. New York: William Wood & Co., 1899.

In 1883 the author contributed a volume on "The Treatment of Wounds" to Wood's Library of Standard Medical Authors. The present volume is developed upon the same lines as the first. The ground, however, has been more completely covered and brought up to date. The author quotes from Professor Humphrey: "The treatment of wounds is undoubtedly not merely the first stone but also the corner-stone of surgery," a truism which can not be too often repeated. In spite of the fact that it is now more than thirty years since Lister first gave to the world his great discovery, antiseptic surgery, the majority of the wounds treated by medical men throughout the country suppurate as they did in the old days of "good and laudable pus." This is largely preventable, and is due to the fact that the average practitioner has not as yet grasped the principles or mastered the technic of clean surgery. This fact furnishes not the excuse but the good reason for the writing of such a book as Pilcher's "Treatment of Wounds." The principles and the practice of wound treatment in general, and the subject of special wounds and wounds of various regions, are clearly and ably handled by the author. The work is peculiarly well fitted for the use of the busy general practitioner who has not the time nor opportunity to obtain from current literature the valuable and accepted improvement in wound treatment.

Saunder's Pocket Medical Formulary. By WILLIAM M. POWELL, M.D., author of "Essentials of Diseases of Children." Fifth edition, thoroughly revised. Leather. Pp. 290. Philadelphia: W. B. Saunders, 1899. Price $1.75, net.

In this edition many old formulæ have been replaced by others of more recent origin and established value, and the dose table modified. An effort has been made to introduce into the prescriptions, where possible, the more important of recently discovered drugs. Besides the formulæ, poisons and other antidotes are considered, and pelvic diameters, obstetric table, diet lists, etc., included.

Manual of Clinical Chemistry. By ELIAS H. BARTLEY, B.S., M.D., Ph. G., Professor of Chemistry and Toxicology in the Long Island College Hospital. Cloth. Pp. 150. Illustrated. Philadelphia: P. Blackiston's Son & Co., 1899. Price, $1.00.

This volume aims to give the essentials of chemic diagnosis, and comprises the last 88 pages of the author's "Text-book of Medical and Pharmaceutical Chemistry," with the addition of notes on urinary diagnosis, and experiments with carbohydrates, fats, proteids and milk; also a scheme for qualitative analysis of prepared foods.

The Pocket Therapist: A Concise Manual of Modern Treatment for the Physician and Student (arranged alphabetically for ready reference). By THOS. STRETCH DOWSE, M.D. New York: Wilbur B. Ketchum. Price $1.50.

This is a republication of a little handbook that seems to have won popularity in its original English edition. According to the publisher, it has been "thoroughly revised in the essentials necessary to meet the wants of the American profession." It will undoubtedly be a convenient ready reference book for those that feel the need of such a work.

Pamphlets Received.

Abdominal Operations, Sequelæ of; a Case of Thyroidectomy. By Wilmer Krusen, Philadelpia, Pa. Reprints.

Aneurysm, Treatment of, by Galvanism. By D. D. Steward, Philadelphia, Pa. Reprinted from Phila. Med. Jour.

Angioneurotic Edema; Neuralgia and Nerve Cries. By Charles H. Lodor, Chicago. Reprints.

Apocynum Cannibinum. By T. S. Dabney, New Orleans, La. Reprinted from Therapeutic Gaz.

Appendicitis; Closing Cecal Fistula; Echinococcus of the Lungs; Ueber die Bedeutung der Röntgenstrahlen bei der Spina Bifida. By Carl Beck, New York City. Reprints.

Appendicitis, the Surgical Treatment of; Treatment of Cardiac Endometritis. By G. T. Meriwether, Asheville, N. C. Reprinted from Charlotte Med. Jour.

Argument of E. N. Dickinson of the New York Bar before the Commission to Revise the Patent and Trade-mark Laws of the United States. Paper, pp. 23.

Association of American Medical Colleges, Proceedings of Denver Meeting. Reprinted from Bul. Am. Acad. of Med.

Bone-Clamp in Ununited Fractures. By Clayton Parkhill, Denver, Colo. Reprinted from Annals of Surg.

Bronchitis, Treatment of Acute; Consideration of Renal Insufficiency; Home Treatment of Pulmonary Tuberculosis; Modern Methods of Diagnosis. By John A. Robison, Chicago. Reprints.

Castrates Capable of Procreation, Are Complete? By F. R. Sturgis, New York City. Reprinted from Med. News.

Cataract, Course and Management of. By J. H. Woodward, New York City. Paper, pp. 17.

Child, Stimulants and Narcotics on Development of. By E. Stuver, Rawlins, Wyo. Reprinted from Journal Am. Med. Association.

Consumption: Cases that Should Go to Colorado; Bleeding Polyp of the Septum; Perichondritis of the Larynx; Technic of Tonsillotomy. By George L. Richards, Fall River, Mass. Reprints.

Consumptives, State and Municipal Control of. By S. A. Knopf, New York City. Reprinted from Med. Record.

Diabetes Mellitus. By James T. Whittaker, Cincinnati, Ohio. Reprinted from Louisville Jour. of Surg. and Med.

Electro-therapeutic Clinic, Record of Three Years in. By Margaret A. Cleaves, New York City. Paper, pp. 32.

Food for the Regiment. By T. E. Bunts. Reprinted from Cleveland Med. Gaz.

Fracture of the Leg; Shortening and Deformity After Union. By J. F. H. Sugg, Clinton, Iowa. Reprinted from Railway Surg.

Gastro-Intestinal Disease, Neurasthenic Symptoms of. By G. W. McCaskey, Ft. Wayne, Ind. Reprinted from Med. Record.

Gastroptosis; Intestinal Auto-intoxication; Chronic Catarrh of Stomach; Transillumination of Stomach. By C. D. Aaron, Detroit, Mich. Reprints.

Hernia, Cure of; Surgical Treatment of Uterine Myomata; the Aseptic Animal Suture in Surgery. By H. O. Marcy, Boston, Mass. Reprints.

Hernia, Inguinal; Radical Cure of by Fowler's Method. By H. C. Walker, Detroit, Mich. Reprinted from the Leucocyte.

Diseases of the Liver. By Jacob Frank, Chicago. Reprinted from Am. Jour. Med. Science.
Rheumatism, Medico-Legal Aspects of. By Sydney Kuh, Chicago. Reprinted from Am. Jour. Med. Science.
Rush Medical College, Fifth Annual Announcement. Paper, pp. 22. Chicago.
Intestinal Invagination, Physiologic, in Child of Fourteen Months; Mechanism of Point; Disorders of Motility of Stomach vs. Myasthenia, Atonia and Ectasia. By Adolph Rosenthal, Chicago. Reprinted from Chicago Medical Recorder.
Kentucky School of Medicine Register. Paper, pp. 23. Louisville, Ky.
Laboratory of Neurology and Psychology at University of Pennsylvania. By Charles K. Mills, Philadelphia, Pa. Reprinted from University Med. Magazine.
Malpractice. By G. W. Thomson, Winamac, Ind. Reprinted from Cleveland Med. Gaz.
Medicine in Germany, Study of. By Emil Amberg, Detroit, Mich. Reprinted from Leucocyte.
Medizinisch-Hygienische Bakteriologie und tierische Parasitenkunde. By A. C. Houston, St. Bartholomew's Hospital, London. Reprinted from Centralb f. Bakteriol. Parasitenkund Infectionskr.
Memorial from National Pure Food and Drug Congress. Senate Document No. 233, 52th Congress, 2d session. Paper, pp. 15. Washington, D.C.
Nasopharyngeal Adenoids, Death following Operation for. By Frank Whitehill Hinkel. Reprinted from N. Y. Med. Jour.
Pediatries, Problems in Study of; Study of Case of Rickets; Urethritis in Male Children. By J. A. Abt, Chicago. Reprints.
Report of Central State Hospital of Virginia, 1898. Paper, pp. 60. Illustrated. Richmond, Va., 1898.
Report of Health Department, San Antonio, Texas, 1898. Paper, pp. 41. Maps.
Report of Eye, Ear, Nose and Throat Hospital, 1897. Paper, pp. 52. New Orleans, La., 1898.
Report of New York Infirmary for Women and Children, 1898. Paper, pp. 55. New York City, 1898.
Report of Committee on Public Health of Medical Society of Washington, D. C. Senate Document No. 183, 55th Congress, 2d session. Paper, pp. 34. Washington, D.C., 1898.
Tuberculosis, Pulmonary, Causes and Conditions of and How to Avoid Them. By E. O. Otis. Reprinted from Am. Jour. Med. Sciences.
Tuberculosis, Pulmonary, Sanitarium Treatment of. By J. E. Stubbert and S. W. Wells, Liberty, N. Y. Reprinted from St. Louis Med. Gaz.
Tuberculous Diseases of Hip-Joint, Relation of Suppuration to Shortening of the Limbs in. By R. A. Hibbs, New York City. Reprinted from N. Y. Med. Jour.

Trade Pamphlets.

Caspar's Classified Catalogue of Medical Books. C. N. Caspar Co., Milwaukee, Wis.
Catalogue. Edison Mfg. Co., New York City.
Catalogue. Western Medical Supply Co., Chicago.
Catalogue of Works Pertaining to Medical Science. Chicago Medical Book Co., Chicago.
Concerning Hemaboloids and Anemia, etc. Palisade Manufacturing Company, Yonkers, N. Y.
Hunyadi-János Natural Mineral Water. Cloth, pp. 113. Illustrated. Budapest: Andreas Saxlehner, 1898.
Maltzyme Preparations. Malt-Diastase Co., New York City.
Manual of Nauheim Treatment. Triton Co., New York City.
"Medical Books," 1899. P. Blakiston's Son & Co., Philadelphia, Pa.
"Oliver Typewriter." Oliver Typewriter Co., Chicago.
Physician's Memorandum for 1899. Cloth. M. J. Breitenbach, New York City.
Successful Essays in Borolyptol. Palisade Mfg. Co., Yonkers, N. Y.
The Twentieth Century Movement. Am. Electric Vehicle Co., Chicago.

PUBLIC HEALTH.

Smallpox in Rochester, N. Y.—Two cases of smallpox were located in a hotel in Rochester, N. Y. The health officer, Dr. George W. Goler, put the hotel with its forty guests under quarantine and announced that no one could enter or leave for two weeks from January 15. A recruit of the regular army later sent to Fort Niagara, N. Y., constituted the original case. He was sick over a week before the nature of his illness was discovered, and was one of a number boarded at the hotel by the Government until the designated posts could be reached.

Consumption and Canaries.—Dr. Tucker Wise (*The Hospital*) says that, from his own observation, he is of opinion that in many instances diseased caged birds, such as canaries, communicate tuberculosis to a serious extent among human beings. As about four hundred thousand canaries are reputed to be sold every year in the United Kingdom, and as it is stated that tuberculosis is one of the most common diseases of birds, it does not seem unlikely that the canary may have considerable influence in the distribution of tuberculous infection.

Scarlet Fever in Bellevue Hospital, N. Y.—The authorities at Bellevue Hospital are somewhat in dread of an epidemic of scarlet fever. An interne of the first medical division, after his usual duties in the institution, developed scarlet fever, and was sent to the Minturn Hospital, a private institution. Not long after the physician's removal, a nurse reported a suspicious case in a male patient, aged 27 years, who was admitted at the request of a female companion, address unknown. A second message to the Board of Health ended in assigning the patient to the Willard Parker Hospital, which is a public institution, adjacent to the former mentioned.

Beriberi in the Brazilian Navy.—The Brazilian cruiser *Benjamin Constant* recently arrived at Bahia from Para, after having left Rio on a long practice trip. Beriberi had broken out suddenly among the crew, and twenty had died on the return trip. The Brazilian navy has always suffered much from beriberi. A. Britto tabulates the cases treated at the Marine Hospital from 1869 to 1881, a total of 425. In 1883 the *Nictheroy* arrived at Bahia from Rio with 111 cases on board. Pereira then proclaimed that naval vessels should not be ordered on long trips with an extensive crew, in those latitudes, when the temperature and the humidity are high. The ventilation should be better, and the clothes adapted to the climate.—*Gaceta Méd. da Bahia*, October, 1898.

Charities of New York State.—From an Albany (N. Y.) clipping we learn that the inmates and other beneficiaries of the institutions, societies and associations included within the jurisdiction of the State Board of Charities, aggregate over 2,500,000, and the expense of their maintenance amounts to nearly $22,000,000 annually. The following statistics show the number and classification of beneficiaries in institutions subject to the supervision of the Board, Oct. 1, 1898: Aged and friendless persons, 6627; almshouse inmates, 11,788; dependent children, 31,090; disabled soldiers and sailors, 1354; epileptics in almshouses, 193; epileptics in Craig Colony, 322; hospital patients, 9622; idiotic and feeble-minded in almshouses, 1085; idiotic and feeble-minded in State institutions, 1288; juvenile offenders, 3514; inmates of reformatories, 1686. Total, 71,013.

Non-Virulence of Dust in Military Barracks.—Kelsch has renewed his experimental inoculations with dust taken from barrack floors, and on the surface and neighborhood of cuspidors. He reports that not a single guinea-pig out of 122 thus inoculated showed the slightest trace of tuberculous lesion; 58 are in perfect health today, the rest succumbed to encysted peritonitis or septic phlegmasia, with the exception of 12, which were killed in the search for tuberculous lesions. Another series of ninety-one animals was inoculated with mucus from the nasal passages. Only one died of an acute generalized tuberculous infection, and this one had been inoculated from a vigorous cuirassier in perfect health; forty-one died of acute peritoneal phlegmasia; seventy seven are still apparently well.—*Bull. de l'Acad. de Méd.*, Dec. 27, 1898.

Yellow Fever in Mexico.—Reports recently presented to the Mexican Government by experts sent to investigate the recent small epidemic at Tampico assert that the disease was not imported. No ships had entered the port from infected points, and the quarantine was too strict to allow any cases to enter the city. The disease also broke out in the center of the town, among persons who had recently come from the central tableland, and not in the shipping district. They conclude that in all Mexican ports the germs of yellow fever are always lying dormant, and that the combination of the necessary conditions with an appropriate "soil" may induce an epidemic at any time. Sanitary prophylaxis is the only means to put an end to this constant menace.—*Bol. del Consejo Sup. de Salubridad*, Dec. 21, 1898.

Dual Life Cycle of the Malarial Plasmodium.—What Surgeon-Major Ross has apparently established in regard to the proteosoma of the sparrow, that this parasite runs a part of its life cycle in the sparrow and the other or complementary part in the mosquito, has been applied to the malarial plasmodium by A. Davidson, and this theory affords a plausible explanation of many of the inconsistent facts observed in regard to malarial infection. The parasite runs the first part of the cycle in man and the second part in some variety or varieties of

mosquito, or vice versa. If man is not present, there must be some animal in malarious regions which serves as the alternative host. He cites a number of instances in which domestic animals offered every symptom of malarial infection, but the only scientific report based on examination of the blood, is that of Dionisi, who "has at last found in certain mammals (bats), a malarial infection due to parasites resembling those of human malaria. The amebæ in these animals are present in great numbers; young annular forms are chiefly seen, but some pigmented forms are also present." He concludes his communication: "Observers in malarious countries should seek for the host in which the parasite normally runs the first part of its cycle. The diffusion of malaria will be found to depend largely upon the presence of this alternative host."—*Janus*, December, 1898.

Illinois State Board of Health.—At a recent meeting of the Illinois State Board of Health at Springfield, according to the press dispatches, the Board considered several recommendations of the secretary to be brought before the State legislature. One of the most important of these was the creation of a State board of medical examiners. The bill as prepared provides for a board of seven members and a secretary. Another calls for the creation of a local board of health in every city, village and town, and every county not under township organization, to make bi-monthly reports to the State Board, while a third provides that the board shall have the supervision of water-supplies and sewerage in all cities, towns and villages of the State, and that all plans for the introduction of new systems shall be submitted to the State Board of Health for approval. The following officers were elected: President, C. B. Johnson, Champaign; secretary and executive officer, J. A. Egan, Springfield; treasurer, R. F. Bennett, Litchfield.

Life-Saving and First-Aid Activity in Europe.—At the instigation of the Empress of Germany, who takes the greatest interest in the work of the ambulance societies, the Kaiser has founded a new decoration to be conferred on members of both sexes who have distinguished themselves in the interests of the Red Cross Society. This new order consists of three classes, that of the third and lowest class being a bronze medal, one side of which bears the red cross, with the initials of both their majesties; while on the other side are the words *Für Verdienste um das Rote Kreuz*, encircled by a branch of oak leaves. The order of the second class is in silver, with the cross in red enamel; and that of the first and highest class a medal in gold, also with a cross in red enamel, finely outlined with white enamel. Among some of the remarkable features at the Exhibition of Ambulances and Life-Saving Apparatus held lately at the Palais Royal, Paris, was a life-belt, hardly any larger than an ordinary waist-belt, but so constructed that in time of danger one has only to blow air in a tube and the belt gradually gets inflated, allowing one to float steadily on the surface until help arrives. This belt, the invention of Mr. Jean of Nevers, France, does away forever with the large and cumbersome cork belts, which, even in some instances are somewhat a source of danger—as it unfortunately happened at the terrible Margate surf-boat disaster. This new belt certainly meets a long-felt want.—*First Aid*, December, 1898.

Diphtheria in Schools.—For some years a professional controversy has been conducted between the medical officer of the London School Board and the medical officer of the London County Council with regard to the prevalence and spread of diphtheria among school children. Professor Smith rides a pretty high horse; he holds that school influence plays but an unimportant part in the enormous increase of diphtheria during recent years in London, and acting on his advice the school board has refused to allow medical officers of health to examine children in the board schools. Now Dr. Shirley Murphy has presented a valuable and almost conclusive report on the subject to the Public Health Committee, showing that the full recognition of compulsory school attendance in regard to the spread of diphtheria is absolutely necessary if efficient preventive and remedial measures are to be adopted. One fact alone is striking—during holiday periods the diphtheria rates fall remarkably, and rise again when the students reassemble. This is no isolated case, but conditions which have prevailed over a series of years. Anyhow, most people would think that Professor Smith would be only too pleased to have the co-operation of any medical officer in so important a matter as this. But no, his board will not budge, and so the London County Council is approaching the Local Government Board and the Education Department. In order to spare the feelings of the school board as much as possible, a preliminary conference has been suggested, but possibly acting on advice, the board may even refuse to send delegates to the Public Health Committee, preferring to spend all their time in academic and theologic discussions.—*Sanitary Record*, Dec. 9, 1898.

Plague in India.—From the *Lancet's* special correspondent in India (*Lancet*, January 7) we gather that in the city of Bangalore, with a population of 60,000, up to Dec. 2, 1898, there had been 2985 cases of the plague with 2361 deaths, the highest total on one day being on Nov. 11, 1898, when there were 122 cases reported. Up to Dec. 17, 1898, Madras city reports 4609 persons inoculated. The returns from the Bombay Presidency show a decline in the deaths, as well as in the number of cases, the death-rate still keeping at about 75 per cent., and the total number of cases from September, 1896, 196,458, and the deaths 155,054. The deaths in Bombay City for the week ending Dec. 17, 1898, were 61. Acting on the supposition that the rat is an active agent in propagating plague, the Bombay Health Department recently organized a systematic destruction of rats, and in the week ending Dec. 17, 1898, destroyed 5263. After the first outbreak the rat population was nearly exterminated, but during the interval preceding the next outbreak, the rat population being partially regenerated was again reduced by the plague. Recognizing their failure to limit the disease, the Government has concluded to encourage voluntary reporting of cases and hopes to achieve this by making the hospitals attractive and taking measures to eliminate the lesser discomforts and loss resulting from disinfection, and obviate the hardships of the temporary removal of the poorer class from infected houses and streets. It is believed that as long as hospitals are regarded with suspicion and dislike there will be concealment of cases, so the hospitals are to be ornamented with flowers, plants and hakims, and the patients will be permitted to employ native practitioners. Again, in the poorer classes the family of the bread-winner is to be supported during his incapacity, and in the event of death supervening, funeral expenses will be paid. Also compensation is to be made for the destruction of any clothing, and the expenses of temporary removal from the infected home are to be paid.

The Pocono Region as a Health Resort.—The advantages offered by the State of Pennsylvania and the question of health resorts have never been brought prominently before the people of the United States as they should be, while the Adirondack Mountains have been lauded to the skies. As a result, thousands from this State, as well as from others, have flocked thither. In Pennsylvania there could be found regions just as health-giving, and at the same time easy of access. During the year 1896, the Pocono district has been free from epidemics of any serious character. Only two cases of typhoid fever have been reported, both unquestionably imported, returning from a distance to be nursed at home. Four cases of diphtheria and five of scarlet fever constituted the only contagious diseases. No malaria existed. This region has in its borders a large number of resorts, resulting in a large transient as well as permanent population. The population is 3950. The alti-

tude of Mount Pocono, the most central station on the Delaware, Lackawanna & Western Railroad, is 1800 feet above the sea, while within a radius of two or three miles from this point, accommodations could be found ranging from first-class hotels to comfortable farm houses, at altitudes varying from 1400 to 2200 feet. The soil, being composed of sand, gravel and broken stone, provides a natural filter-bed. For this reason the drainage in most sections is perfect, and all surface water disappears very rapidly after a heavy rain. Streams of crystal clearness and uniformly cold abound in all the valleys, while the hillsides are full of springs. Bacteriologic examinations of a sample of spring water proved it to be sterile and free from germs even of a harmless nature.—*Public Health*, December, 1898.

The **Purgation of Havana.**—The high cost of cleansing a chronically filthy city is indicated in the recent report by the late Colonel Waring, who was an expert particularly well fitted to take a wide and full view of the needs of a city like Havana. For more than a century Cuba has not only been a pesthole for the natives of the island, but has been likewise a distributing center to every one of the Southern States doing business in its ports. Dr. Bruner, the officer of the Marine-Hospital Service stationed at Havana, and a gentleman well qualified to give an opinion on the subject, has stated that during the last hundred years the South has lost more in property and treasure as the result of the pestilences imported from Cuba than could be covered by all the pecuniary calamities inflicted upon it by the Civil War. And this damage will doubtless go on so long as Havana remains in its present state of pestilence-breeding activity. The *New York Times* says of the report of Colonel Waring, that it leaves no doubt in regard to the duty of this country in respect to the sanitation of Havana. Our duty is also, as the report points out, our interest. We should have been entitled to interfere to expel Spanish misgovernment from Cuba in order to prevent Spain from keeping up a chronic menace, occasionally fulfilled, of the epidemic of a filthy disease, as we were in interfering to prevent her from starving the Cubans to death. Colonel Waring's estimate of the cost in mere money of a single epidemic of yellow fever at $100,000,000 does not seem extravagant. And this chronic danger he considered that we could remove absolutely and permanently by an expenditure of $10,000,000, including a complete system of paving as well as of sewerage. For this sum we can clean Havana, and provide the means of keeping it clean, convert it from a pesthole into a place not only habitable for its own immune population, but safe for strangers to visit for business or pleasure, at all seasons of the year.

Boards of Health in Porto Rico.—Gen. Guy V. Henry, military commander of the Department of Porto Rico, has issued a general order establishing boards of health in the islands. The Board constituted at San Juan is composed of: 1. Capt. L. P. Davison, Fifth U. S. Infantry, the president of the Board and Executive Officer and Sanitary Inspector of the Island; 2. The health officer of the port; 3. The health officer of the city, and, 4 and 5, two members of the City Council to be selected by that body, one member having special interest and knowledge of street cleaning, policing, etc., the other member having knowledge of public works, water-supply, sewerage, etc. Military commanders of districts are required to have similar boards organized in their towns. In the absence of troops the alcalde will be the head of the Board; the number of councilmen may be reduced to one, and at towns not on the sea the health officer of the port will be omitted. These Boards will gather vital statistics and other information, and will make recommendations, which they will forward to the Board at San Juan. This Board will keep the department commander informed of all matters needing his attention. The Board at San Juan will formulate regulations governing sanitary surroundings, overcrowding of buildings, policing of houses inside, front and rear, throwing of refuse matter of any kind into the street or on the ground, and the proper clothing of men, women and children, or exposure of person. The Board will also fix a fine for the violation of such regulations, said fine to be collected and turned into the municipal treasury for charitable purposes. In the event of failure to pay this fine, an imprisonment for a fixed number of days will be imposed and carried out by each alcalde. The regulations fixed by the Board at San Juan to govern at other places as well will be complied with, and any failure to carry out its orders will be reported, so that other action may be taken.

Governor Hastings' Proclamation and Health Matters.—The proclamation of Governor Hastings of Pennsylvania has been made public and contains items of interest to medical men as follows: "The humane and economic care of the different classes of the indigent insane, as well as the proper management of the penal institutions of the State, will, I doubt not, call for additional legislation. The State hospitals contained at the close of 1897 over 1500 patients in excess of their capacity and 250 more than during the previous year. The annual increase in the number of indigent insane in all the institutions in the State is about 550 new cases. If they were all to be provided for in State hospitals, considering the increasing number of new cases, it would reqire the erection of a new hospital every three years at a cost of from $2,000,000 to $3,000,000 for each new institution." "There is now urgent need of separate hospital care for indigent epileptics and the epileptic insane. There is no chronic brain malady, insanity excepted, that renders helpless so large a proportion of our citizens or that appeals more powerfully to human sympathy. It is suprising to know that there is one epileptic in every 1000 persons in this commonwealth. In the five State hospitals for the insane there are now confined 520 cases of epilepsy in its different forms. Epileptics have no true place in the hospitals for the insane. If all epileptics were to be placed together, without opportunity or space for classification, they would react unfavorably upon each other. They should be gathered together in institutions specially designed for their care, such as in the States of Ohio, New York, Massachusetts and California. The State should do well to purchase a farm of 500 acres in extent and erect thereon a hospital on the cottage plan, each cottage to contain a limited number of inmates suitably classified." "The present average per capita cost for maintenance in the State hospital ranges but little less than the $3.75 fixed by law. While this sum is not extravagant as applied to treatment of acute cases and those requiring hospital care, it certainly is extravagant and unnecessary as applied to the actual requirements of the quiet chronic cases. The quarantine for the port of Philadelphia should, in my judgment, receive enlarged powers and facilities, and if the treasury will warrant it, should have a quarantine boat, to be made of steel, constructed to meet the emergencies of the service and with a high rate of speed." The latter suggestion is offered by the Governor in view of the fact that there will soon be increased trade with the West Indies, with a consequent danger in the introduction of yellow fever and smallpox.

Study of Tropic Disease as an Aid to Civilization.—According to custom, we mention in our columns the medical subjects that events may bring to the front from time to time. Among the more important of those claiming not only public but medical attention during the last few months is the subject of tropic disease. It is, therefore, with much gratification that we note the aims of our British kinsmen in establishing the London School of Tropical Medicine, which is justly claimed to be an aid to civilization. The school is an extension of the Seaman's Hospital Society of their branch hospital already existing and is to be established in the neighborhood of the Albert Docks as

an addition to the hospital already existing. We are told that this establishment of this school is an idea very largely due to the initiation of Mr. Chamberlain, as Colonial Secretary, who has lately given more than one proof of his conviction that the study of diseases, to which Europeans living in tropic countries are specially susceptible, is a duty of the State, and more especially the duty of so great a colonizing State as Britain. One evidence of this conviction has been the appointment of a Commission to investigate the subject of tropic malaria. Three medical officers have been selected for the work in Africa—Dr. Daniels, of the Colonial office medical service, Dr. Stevens, and Dr. Christopher. Dr. Daniels has already sailed for India in order to make himself acquainted with the recent observations of Surgeon-Major Ronald Ross, of the Indian Medical Service, concerning the spread of malarial disease with certain species of mosquitoes. The two other investigators will go direct to Nyassaland in British Central Africa to study malarial disease in that locality, and will be joined eventually by Dr. Daniels. With the knowledge acquired in a comparatively temperate climate, where, however, fever has of late years been comparatively fatal—the three medical officers will at a later date visit West Africa, possibly on the Niger. The investigations are expected to last two years, and they will report at intervals to a committee jointly appointed by the Royal Society—a contribution—and by the Colonial Secretary. It is to investigations such as this that the training to be received at the School of Tropical Medicine will be a preliminary and a preparation. The necessity for it is clear. In its absence medical men go to all parts of the world, and are there confronted by diseases, both in Europeans and natives, such as they have never seen before, and which in the great majority of instances they have no opportunity to study. One can soon run up a deadly list. There is, to take the case nearest England, Malta fever—in which a satisfactory means of fighting the herpetomonas parasite has not yet been found. There is malaria in Central Africa, in West Africa, and another variety off the coast of New Guinea. There is "black-water fever," which Dr. Koch, in an opinion diametrically opposed to most observers, has declared to be due to quinin poisoning, but which every other investigator believes to be due to a parasite. There is leprosy, there is cholera, there is dysentery, there is Madura foot, there is the growing terror, enteric fever; and there is the plague. How vitally necessary information is with respect to some of these scourges, and the kind of information that will have to be undertaken some day with respect to them, can be gathered from the Commission now investigating the plague in India. It includes Dr. Fraser, F.R.S., Dr. Wright of Netley, and Dr. Rüffer, late head of the Egyptian Sanitary Department, and it is investigating; 1, the origin of the different outbreaks; 2, the manner in which the disease is communicated, and 3, the effect of certain prophylactic and curative serums that have been tried or recommended for the disease. The last clause of the last sentence indicates to some extent what will be the work in the "bacteriologic laboratories of the new school. Such a laboratory is necessary for the hospital's equipment. The Albert Docks branch of the Seaman's Hospital is, in spite of some opinions in detraction of the scheme, a very good nucleus for the school, because although the number of cases actually suffering from the more obscure or less well-known of tropic diseases is not large, still there are some. For one cause or another the twenty-three beds which the hospital provides are always full, and there is every reason to believe that the demands on the forty-five beds to which the number is to be brought up will be equally pressing. The total cost of the scheme of enlargement of the hospital and construction of the school will be upward of £16,000, and it is estimated that the expenditure will be £3000 a year. The Colonial Office has headed the list with a sum of £3,500 as a contribution toward the cost of erecting and equipping the school. It is estimated that the students sent by the Government will contribute toward the cost of the maintenance of the school about £1000 a year. Public subscriptions and arrangements for the scheme are making satisfactory progress, as evidenced by the appointment of a highly competent sub-committee who are perfecting the details of the curriculum and of the new building which it is announced will be completed by next October. Believing that the foregoing scheme has much suggestiveness of a practical character that may benefit many of our countrymen interested in the subject, we take pleasure in bringing it to the attention of the readers of the JOURNAL.

MISCELLANY.

Milwaukee (?) Physician.—Some time ago the Treasurer received from some physician in Wisconsin, a communication with $5.00, but the physician neglecting to sign the letter or give address, proper credit could not be given. The same person now writes to inform us that his dues have not been credited, but again neglects to give his name or address.

Surgeon-General Sternberg.—Dr. Sternberg has returned to Washington, D. C., from his recent tour of inspection in Cuba.

Dr. Thomas G. Lee, of the Medical Department of the University of Minnesota, Minneapolis, has gone to Paris on leave of absence.

New Orleans Physician Honored.—We learn that Dr. Fred Loeber, has been decorated with the Order of the Crown, by the Emperor of Germany.

Ohio Medical University.—We learn that George W. Matson, M.D., has been made professor of materia medica, Andrew Timberman, M. D., professor of laryngology and rhinology, E. F. Wilson, M.D., professor of therapeutics, Thomas G. Youmans, M.D., professor of dermatology, the former incumbents of these chairs having recently resigned from the faculty.

Memorial to Feulard.—A portrait tablet has been erected at the Saint-Louis hospital at Paris, to the memory of the talented young physician, H. Feulard, who lost his life at the Charity Bazaar fire, trying to save others. His pet projects, the foundation of a central library for the hospitals and the installation of a complete photographic laboratory to supplement the wonderful museum at the Saint-Louis, are approaching realization as further tributes to his memory.

Health Officer, Port of New York.—Dr. Alvah H. Doty has been renominated by Governor Roosevelt for a second term of four years as Health Officer of the Port of New York. The annual salary of the office is $12,500. Dr. Doty was first appointed by Governor Morton in 1895 and his term expired Jan. 1, 1891. He would have been re-appointed before had not this fact been overlooked. The Governor considers Dr. Doty one of the most efficient and faithful officers in the State service. They were together on the New York Board of Health and their relations have always been cordial.—*N. Y. Sun.*

"Ohio Medical Gazette."—We learn that Dr. James M. French, editor, will accept the police surgeonship, Cincinnati, Ohio, succeeding the late C. L. Armstrong, M.D.

"Tri-State Medical Journal and Practitioner."—Dr. James Moore Ball has severed his connection with this publication, as chief editor, retaining an associate editorship. Dr. Warren B. Outten, St, Louis, succeeds him.

"Kansas City Medical Index."—Dr. Charles B. Hardin, professor of physical diagnosis in the Medico-Chirurgical College of Kansas City, has become associate editor of the *Kansas City Medical Index.*

New Publications.—A new periodical, the *Zeitschrift für Augenheilkunde,* devoted to ophthalmology, is to appear during January, 1899, published at Berlin and edited by Geh. Med. Rath Kuhnt, of Königsberg, Prussia, and Professor von Michel of Würzburg . . *Climate,* a magazine of medicine which began publication in November, 1898, has been received. This quarterly is edited by S. Claiborne, Jr., M.D., of St. Louis, and published at $1.00 a year.

A Journal Change.—The *Kansas Medical Journal,* Topeka, Kan., has been discontinued, and its former editor, Dr. W. E. McVey, will have editorial control of the *Medical Monograph,* which will be published monthly in place of the *Kansas Medical Journal.*

Experimental Hydronephrosis.—Hildebrand and Haga confirm Tuffier's experience that if the ureter is crooked by being

drawn up with a loose thread, the portion above dilates and hydronephrosis inevitably results, as follows when the ureter is ligated. But hydronephrosis failed to follow the making of a wandering kidney by shelling the organ out of its capsule, even when it was twisted with the ureter twice on its axis.—*Cbl. f. Chir.*, Dec. 24, 1898.

Tuberculosis of Mammary Gland.—In a paper on this subject (*Annals of Surgery*, December, 1898), LeCount considers the history, symptomatology and clinical course and presents cases. He points out that in the beginning there may be no recognizable symptoms. In the disseminated nodular or discrete type, in only a few cases is the volume of the breast augmented or its contour changed, and the skin covering the gland is normal in appearance, non-adherent to the intraglandular mass, and with no fistulæ opening on its surface. Palpation reveals one or more nodules, movable, hard, and but slightly painful on pressure. At times ill defined, their outline is usually distinct and slowly increasing in size, they soften, caseate and in the end form fistulæ. Where a simple nodule is present it is usually in the upper and outer quadrant of the organ; where a number are present, they are usually distributed through the gland. The most characteristic features of this disseminated form are the extreme chronicity of the process and its painless and insidious development. In the confluent form of the disease there is more acute onset, greater pain and rapid enlargement of the gland.

Anatomic Investigation of Hypertrophied Prostate.—B. Motz reports the results of the examination of 130 cases in Guyon's clinic with the necropsies of those who died. He found that no subject was under 50 years of age. The size of the gland was nearly normal in one-fourth of all the cases, which indicates that the disturbances are not all to be ascribed to hypertrophy of the gland. There seemed to be no connection between the size of the gland and the age, but on the other hand, a decided hypertrophy was always accompanied by advanced arteriosclerosis. He also considers the assertion justified that the size of the prostate is always in direct proportion to the size of the testes, concluding that true hypertrophy of the prostate is a normal, although rather tardy development, consequent upon the increased energy of the genital apparatus.—*Cbl. f. Chir.*, Dec. 24, 1898.

Gunshot Wound of the Head.—Barritt (*Lancet*, January 7) reports a case of penetration of the brain by an iron ramrod, in a boy 15 years of age. A complete recovery followed, clearly showing, like other lesions previously reported, that the brain can sustain injuries which one would consider to be absolutely fatal and yet will recover without any apparent detriment to its structure, although the parts injured were in the left frontal lobe of the brain, where some loss of function might be considered almost certain.

Gastric Origin of Rachitis.—L. Raulin states that the conditions of digestion in rachitic children are decidedly abnormal. The secreting function is extremely defective, and also the quality of the secretions. The chloro-organic compounds, instead of being normally acid, are neutral or even ammoniac. The amount of chlorin is below the average. There is no free hydrochloric acid. The organism suffers from the lack of properly digested nourishment, and the stomach is the seat of abnormal organic ferments generating acids, principally lactic acid, which affect the bone substance unfavorably, especially the phosphates. The abnormal chloro-organic compounds probably aid in forming digestive toxins which disturb the nutrition of the cells throughout the organism. He urges further research in this line, as his material was limited.—*Archives Clin. de Bordeaux*, October, 1898.

Quinin in Fever.—G. M. da Silva Jones of Lisbon considers the ordinary sulphate of quinin the essential treatment of fever, on account of its chemic affinity for carbon dioxid. He has noted that the calorification of fever is distinguished from normal, as far as the secretions are concerned, by an excess of carbon dioxid, and consequently too many non-saturated alkaline phosphates, and an excess of acids, hydrochloric, phosphoric acid, etc., and also by an excess of oxygenated water which, by exaggerating the organic combustions, keeps adding to the excess of carbon dioxid. Quinin, especially the sulphate, seizes the carbon dioxid, whether it is free or combined with an alkaline base, and eliminates it as these bases and the hemoglobin eliminate it in normal conditions, but to a much greater extent, and it also decomposes the dimetallic phosphates which are dissolved in a larger proportion during fever, forming with the soluble chlorids an excess of hydrochloric acid. The action of quinin in fever is more marked, as the stomach and lungs are working normally. This communication was presented at Moscow, but is published in full in the *Jornal das Sci. Méd. de Lisbon*, 1898, 4 and 5. Van Marter recommends Warburg's tincture, as it affects the toxins and the malaria plasmodium in some unknown way, and enables the organism to derive greater benefit from the quinin, which has no effect upon the toxins. He considers quinin valuable in every form of intermittent fever, but that it fails in a continuous fever. Hemoglobinuria is a counter-indication for quinin.—*Louisville Med. Monthly*, September, 1898.

Uterine Infection.—Rondino of Naples has produced postpuerperal infection in guinea-pigs, by injecting cultures of microbes into the uterus—streptococcus, bacterium coli, Lœffler and anthrax bacillus. The diapedesis of the leucocytes can even take place through the epithelium of the healthy mucosa, without puerperal conditions.—*Bull. de l'Acad. de Méd.*, Dec. 13, 1898.

Fatty Matters in Tubercle Bacillus.—Auclair isolated the fats and wax that form 27 per cent. of the body of the tubercle bacillus and injected them, dissolved in ether, chloroform or benzin, into animals, subcutaneously, producing each time a nodule and chancrous ulceration, which healed after a longer or shorter interval. This process occurred with each injection and more rapidly as the injections had been more numerous. Injected into the trachea he succeeded in producing a genuine caseous pneumonia, histologically the same as in man.—*Bul. de l'Acad. de Méd.*, Nov. 22, 1898.

Treatment of Uterine Fibroids.—E. E. Mongomery (*Penn. Med. Jour.*, December, 1898) maintains that there are many uteri from which a sessile, submucous, an interstitial fibroid, or multiple growths, can be removed by enucleation, leaving a healthy functionating organ. "This practice," he says, "under proper aseptic precautions, is attended with less shock and discomfort to the patient than the apparently more simple operation of extirpation of the organ. Whether the growth shall be attacked through the vagina or by way of abdominal incision will depend upon its situation, size and the previous condition of the patient. Pedunculated or sessile, submucous and interstitial growths which have not attained too large a size to pass through the pelvis should be attacked through the vagina unless the patient is unmarried and the vaginal orifice undilated. When the growth is so large as to rest above the pelvis, the uterus is occupied by multiple growths, possibly comprising every variety, or the vagina is small, the abdominal route is preferable. Necessarily, not every patient will present conditions favorable for such an operation. The uterine structure may be so extensively involved as to preclude its successful retention, or be complicated by disease of the appendages, so severe as to render restoration of function impossible. In such cases a sacrificial operation must be done."

Disappearance of Poisons from the Blood.—Professor Heymans of Ghent has been studying the interval that elapses after a poison has been introduced into the blood until its entire dis-

appearance from the circulation: while minimal for fulminating poisons, like prussic acid, it may last hours or even days in the case of others. Gradually removing two-thirds of the blood from an uninfected animal, he found two to six minutes the average length of the period during which an animal could be saved after an intravenous injection of "either of the dinitrites, succinic, malinnic or pyrotartaric," although death followed an undisturbed intoxication after an interval that varied from an hour and a half to four hours. He is inclined to attribute this difference in the length of survival to the varying length of time before the cells succumb to the effect of the different poisons. He has also established that tetanus and diphtheria toxin and venom pass almost immediately from the blood into the cells, and that withdrawing large amounts of blood will not save the animal except immediately after the inoculation. On the other hand, it is abundantly proven that the diphtheria and tetanus serums are able to save animals even hours after the infection, which shows that the serum must follow the toxin into the cells and neutralize it there. These facts seem to render dubious the efficacy of lavage of the blood in infections. —*Gaz. Méd. Belge.*, Dec. 15, 1898.

Mineral Salts and Thermogenesis.—Insinna and Dolce have been investigating the effect of the ingestion of mineral salts on the production of heat, and find that salt, for instance, while promoting the oxidating processes, renders possible an increased production of heat with a diminished supply of combustible material. This may be due to the combination of the salt with other mineral salts, thus generating heat, or possibly to its promotion of oxidation or other chemic processes that can not take place without a certain amount of mineral elements. In either case they exert a vital energy in a potential state in the organic material.—*Gaz. degli Osp.*, Dec. 18, 1898.

Physical Training in Pulmonary Tuberculosis.—Ingals (*Dietetic and Hygienic Gaz.*, December, 1898), in discussing the value of systematic physical training in prevention and cure of pulmonary tuberculosis, says: One of the first injunctions we should place upon the patient who has any reason to anticipate the development of pulmonary tuberculosis is that he should expand the lungs thoroughly several times every day. We must also personally inspect his mode of breathing to see that he knows how to carry out our instructions. In order to expand the lungs the patient should be directed to draw in the abdominal walls and take a long, deep breath, while the shoulders are carried gradually backward, and the ribs and sternum elevated as far as possible; he should hold his breath for a few seconds and then blow it out slowly and forcibly through a small opening between the lips. In this way not only the air-cells which can be reached by direct inspiration are inflated, but also those at the apices and along the border of the lungs, which otherwise might not be distended. One has only to try this method a few times when out of breath after active exercise to ascertain how much more effective it is than the ordinary method of respiration employed by those who have had no physical training. By a few deep inspirations, such as just described, the healthy individual who has exhausted his breath will find that he can speedily recover it; whereas, by the usual respiratory efforts, he will pant for several minutes before he can obtain relief.

School of Medicine at Beyrout.—According to the *Brit. Med. Jour.* (Dec. 31, 1898, p. 1961), there is a medical school which rejoices in the unique privilege of having a Jesuit as its Director, the French Medical School at Beyrout, Syria. The teaching staff consists of eight French medical men, all former internes of French hospitals and holding the doctor's degree of the Universities of Paris, Lyons and Montpellier. There are departments of chemistry and pharmacy and a laboratory of microbiology, all under the direction of French men of science. Recently a midwifery clinic has been added. The number of pupils is 130. It is only recently that the school has begun to grant diplomas, and at present the average output is about ten a year. A prolonged struggle has been carried on to get these diplomas recognized as valid by the Turkish Government; but now, it is stated, the matter is on the point of being settled in a satisfactory manner.

Rupture of the Bladder.—Drappier reports the case of a farmer kicked by a horse, after being thrown, rupturing and emptying the bladder. The perforation must have been small, and, occurring when the organ was very much distended, was closed by the contraction of the empty organ, and rapidly healed. The harmlessness of so large an amount of urine in the abdominal cavity confirms Tuffier's assertions in regard to the rapid absorption of aseptic urine by the peritoneum.—*Journ. des Sci. Méd. de Lille*, December 10.

Rupture of the Heart.—P. Hampeln has observed seven cases, all fatal, and notes that rupture of the pericardial portion of the aorta is accompanied by greater pain in the epigastrium than rupture of the heart proper. In both, the predominant symptoms are extreme weakness of the heart, and pain. There is no severe anemia as the loss of blood is slight. Death is not due to hemorrhage but to compression of the heart by the acute pericardial stretching and tension in case of rupture of the aorta. As the tension in case of rupture of the heart is not excessive, death must follow the extensive destruction of the heart musculature by the rupture. It is impossible to differentiate a rupture from any other fatally tending acute affection of the aorta, such as occlusion of the coronary or dissecting aneurysm. Aspiration of the blood might be attempted in rupture of the aorta, but measures to quiet the organ and soothe the pain are required for rupture of the heart. Stimulants are counter-indicated in each case.—*St. Petersburg Med. Woch.*, December 10.

Congenital Luxation of the Hip.—Kümmel has been investigating the ultimate results of forty-five cases in which he reduced the luxation by the Pravaz Lorenz method during the last two and a half years. He has been surprised and gratified to find the functional results much better than he had anticipated. Radiographs taken before and after treatment showed the entire absence of an acetabulum in many cases, and yet a firm support has developed in the pelvis, holding the head in such a position that the gait and movements of the limb are most satisfactory. The aim is to fix the head, which puts an end to the abnormal movements. Whether the head is in the spot where it anatomically belongs is not so very important. The essential point is to hold it firm. In most cases the screw is unnecessary; the limb is merely stretched and the transposition of the head affected. He advises against treating both limbs at once. The operation failed in only a few isolated cases, in which the head could not be held firm. In nearly every case with or without an acetabulum, there is no fatigue, the head is "fixed," and the lordosis compensated.—*Munich Med. Woch.*, Dec. 20, 1898.

Concerning Children.—In a "Chat Concerning Children" (*Dietetic and Hygienic Gaz.*, December, 1898), Dr. I. N. Love of St. Louis says, among other things: "The physical training should be begun at birth, if not before, and continued till adult life and after; the mental can be left pretty well to itself for the first few years. Indeed there is danger in premature mental training, but the moral education should be begun in the cradle. The regularity which we physicians insist upon in the daily life of the infant for physical reasons helps its moral education. . . . Systems, rules and regularities which develop directness and certainty of conduct are helpful morally and intellectually. . . . Their emotional impulses need to be constantly controlled, kept in check. Children, large and small, are always in much more danger of losing their head than their heart. We can not too strongly impress

the mother with the fact that the systematic régime for her babe is then not only helpful, necessary, physically, but that it is in fact the first step in mental and moral education, developing self-control and obedience."

Hysteria a Vigilambulism.—According to a recent theory, "hysteria is a physical, functional disturbance of the brain, consisting in a torpor or actual sleep, local or generalized, transient or permanent, of the cerebral centers, with manifestations that vary with the centers affected, vasomotor or trophic, visceral, sensorial or sensitive, motor or psychic, and according to the degree and permanence of the disturbance, causing transient seizures, permanent stigmata or paroxysms. A confirmed hysteric is a vigilambulist, sleeping more or less profoundly, and more or less extensively."—*Bull de l'Acad. de Méd.*, Oct. 18, 1898.

Delirium from Auto-intoxication.—Prof. E. Régis contributes a careful study of eight cases in literature and two personal, in which an acute psychosis appeared, similar or identic with what is known as "delirium acutum," but without the fever or the remissions usual with the latter, terminating fatally in eight to fourteen days, with heart failure, or cured in a few of the cases with heroic measures to abolish the coprostasis. (Alessi's case was mentioned in the JOURNAL at the time, cured with .8 gm. calomel and .6 gm. of scammony.) The pathologic anatomic characteristics are a hyperemia and edema of the brain, a great afflux of blood to the lungs, and a parenchymatous degeneration of the kidney, liver and heart, with a tendency to secondary formations in the intestine.—*Archives Clin. de Bordeaux*, October, 1898.

Arterial Sclerosis.—Two important and almost pathognomonic signs of hypertension of the arteries are, according to Professor Huchard (Paris letter: *Med. Press and Cir.*, London, Jan. 4, 1899), diastolic sonorous bruit heard at the base of the heart and on the right side of the sternum. i. e., on the aorta, and the stability of the pulse, regardless of position. In the normal state the pulse diminishes by six to eight beats in the horizontal position of ordinary individuals, but in sclerosis the pulsation remains the same as in the vertical position. Treatment should have reference to the cause and the effect of the hypertension.

Antitetanic Serum by Intracerebral Injection.—In the *Brit. Med. Jour.* (Jan. 7, 1889, p. 10), Sempeke reports a case of tetanus in which he used tetanus antitoxin intracerebrally, by the Roux and Borrel method (vide JOURNAL, Jan. 7, 1899, p. 83), but in addition the patient received 20 c.c., hypodermically, in the flank, daily for three days. The intracerebral injection was 2.5 c.c. in each frontal lobe of the brain, of doubly strong antitetanic serum. He describes the operation in detail. Recovery followed.

Etiology of the "Lymphatic Temperament."—Camescasse ascribes this condition to an ordinary infection in early childhood, when the lymph-glands are larger than later in life. A simple infection of the nasopharynx may lead to infection of the cervical glands, which in turn affect the entire lymphatic system, producing the "scrofulous" condition, preparing a soil for future tuberculous and other infection. "Avoid ordinary infections. They may prove more disastrous than the most dreaded infection later in life. The presence of a single child with impetigo, in a school, may lay the foundations for the lymphatic temperament in countless others." Kalach considers his statements exaggerated.—*Bul. de l'Acad. de Méd.*, Nov. 15, 1898.

Mice in the Intestines.—W. Fritz of Bischofsheim relates in the *Munich Med. Woch.* of December 27, that a three-year-old child brought to him with every indication of ileus from invagination, responded to a copious enema and castor-oil by the evacuation of two putrefied mice. He does not attempt to explain how the mice arrived in the intestines, but merely inquires if any other confrère ever had a similar experience.

Influenza not Contagious.—Dr. Curtis, of the N. Y. State Board of Health, claims that influenza is not contagious from the fact that its onset is too sudden, simultaneous and far-reaching. Probably a humid and loaded atmosphere, along with the absence of sunshine as a snow melter, is the chief factor of its universality. Hence sanitation of city streets needs prompt attention. The people may sometimes be right.

Trichinosis.—Cases of trichinosis were recently reported at Croton, Ohio (*Ohio Sanitary Bul.*, January), the seven members of one and nine members of another family being more or less affected. Indications tend to show that the diseased meat came from hogs which had been fed a number of rats, which animals are frequently affected with trichinosis.

New Method of Disinfection.—According to the *Sanitary Record* of January 6, a mixture of formaldehyde and glycerin is sprayed into a room to be disinfected, until a thick fog results, by means of a specially constructed apparatus. For 1000 cubic feet, about four pounds of the mixture are needed. The room need not be hermetically closed during the disinfection, the circulation of air assisting in spreading the disinfectant. Three hours' exposure was found to be sufficient to kill all germs in the room experimented on, though the test-objects were purposely chosen of the most refractory nature. For instance, pieces of linen thickly coated with a paste of white of egg and garden soil, dried in an incubator; layers of soil three or four millimeters thick with potato skins under and above them. These were placed open and covered at various heights in the room, in recesses in the wall, on the floor, under furniture, in tall glass cylinders, or in shorter cylinders under a layer of wadding, in the pockets of thick clothing, etc. Live guinea pigs and rabbits were found to be freed from bacteria in their skins, their bedding straw, and their excrement. The advantageous effect of adding the glycerin to formaldehyde is attributed to its hygroscopic character and its power of adhering and penetrating.

Low Official Standards of Milk Purity.—Dr. Harold Scurfield, medical officer of health of Sunderland, England, in his last annual report adverts to the low milk standards that have been established. It is practically impossible for the mixed milk of several cows to be as poor in quality as the governmental standard, unless the cows are improperly fed, or are unfit for dairy purposes, and it is much to be hoped that the standard for genuine milk will ere long be raised. So far as the consumer is concerned, it matters little whether the milk is made watery by feeding the cow poorly, say with an excess of brewers' grains, or by actually adding water to the milk. To avoid the risk of injustice being done by the adoption of a higher standard for milk it might be made permissible in doubtful cases, for the dairy farmer to state from what cows the dubious samples came, and for a second sample to be taken, the cows being milked in the presence of the inspector. Then, if two samples corresponded, this would be considered a valid defence against the charge of adulteration. The proceedings alone would be sufficient punishment for the poor feeding.

Sanitation in Havana.—At a meeting of one hundred physicians, in Havana, Cuba, January 18, it was determined to make a house-to house canvass of the city, one physician being assigned to each of the 100 districts into which the city is to be divided for this purpose.

Concerning Antitoxin.—The potency of Mulford's antitoxin, known as Standard and formerly containing 100 units per c.c., has been increased in unit strength to 350 units per c.c. All the sizes of Standard (Special), excepting No. 4, containing 3000 units, will now be furnished in the new package. Standard containing 100 units in each c.c. will be supplied in glass-stoppered vials on order specifying this strength. Concentrated antitoxin contains from 500 to 800 units per c.c., and is to be preferred because the smaller bulk insures quicker absorption and more prompt results.

Examination for Funeral Directors and Embalmers.—The third examination was held in East St. Louis, Ill., January 24. Dr. Ludwig Hektoen of Chicago, J. C. Sullivan, of Cairo, H. D. Sheldon of Chicago, W. V. McKinstry of Delavan, Frank Ketchum of Chicago and Dr. J. A. Egan, secretary of the State Board of Health, constitute the Examining Committee. The result of the examination held in Chicago, Dec. 6 and 7, 1898, was as follows: Applicants present, 340; took examination, 306, of whom 265 passed the written and practical examination, and 4 passed the written but did not take the practical.

Missouri Medical Legislation.—A bill has been introduced in the legislature, which aims at better regulation of medical practice in that State.

Fees of Expert Witnesses.—According to the ruling of a New York judge, this subject may become a matter of inquiry. He gave his opinion in the following language: "But, with the imperfections that are conceded to exist in expert testimony, we think that the plainest dictates of justice require that the opposing party should have every opportunity to inquire into the fairness and interest of the expert, as well as into his scientific skill and knowledge. Plainly, the size of a fee a witness is to receive for his testimony may, in the case of a weak character, bias his judgment, and the parties and the jury are entitled to know just what compensation an expert witness has received or is to receive."

Report of Cooper Hospital.—The following is a report of the Cooper Hospital, Camden, N. J.: Number of new patients received, 584; discharged cured, 410; improved, 90; unimproved 10; died, 59. Patients treated, 12,972.

State Hospital for Consumptives.—According to press dispatches, the Michigan State Board of Health has decided to ask the Legislature to establish a State hospital for consumptives and to enact a law providing for the better reporting of consumption to local health officers and also for a law providing for a board of State medical examiners.

The Wisconsin County Asylum System.—Dr. C. B. Burr has had occasion to inspect the insane asylums of that State, and it is reported in the *Charities Review* for December, that they were found open to great improvement. The county system of that State has been greatly praised in some quarters, but according to Dr. Burr it can not be favorably considered in comparison with the system of State care. Dr. Burr sums up his objections to the county asylum system as follows: 1, absence of the hospital idea; 2, lack of medical oversight; 3, the inadequate care of patients, particularly of the filthy and feeble classes and epileptics; 4, lack of sufficient attendants, which necessitates patients remaining too much indoors, particularly in the winter time; 5, lack of standards of care prescribed and enforced by central authority, superior to politics, as shown in the extreme variation in per capita cost and differences in beds, furnishings and attendance; 6, lack of sufficient State supervision, and 7, frequent lack of discriminating local supervision, this due chiefly to absence of knowledge of the requirements of the insane and the desire to make favorable financial showings to the Board of Supervisors. The above conclusions show that in Wisconsin there are conditions that call to mind the state of affairs that existed in New York previous to the "State Care Act," when although there did exist some well-conducted county asylums, there existed many others that were a disgrace to the name. There was no standard of care for the inmates which could be used as a basis of comparison with other systems. In New York, for instance, the care of all the chronic insane is absolutely uniform, and an investigation of one institution will show the standard of all. It remains to be proven that in any State, under the county care system, there exists a uniform standard.

Hospital Concert.—The fourth annual concert for the benefit of the Presbyterian Hospital, Chicago, was given in the auditorium the evening of January 23. The soloists were Mme. Sembrich, Sig. Campanari, and Willy Burmeister, with the Chicago Orchestra. The financial benefit to the hospital will be large.

N. Y. State Board of Charities.—Statistics covering the previous fiscal year, collected by the Board from the officers of charitable institutions, show that the public and private charities in the State of New York, which are subject to the supervision of and report to the Board, had an annual income exceeding $23,000,000, that they expended nearly $22,000,000, and owned real and personal property conservatively estimated to be worth $103,000,000; also that within the year in question they administered charitable assistance of various kinds, more or less costly, to a great army, reported as numbering over 2,500,000 beneficiaries.

Hospitals.—The Stickney Memorial addition to St. Luke's Hospital, Chicago, was dedicated January 26 . . The Margaret Welsh Dulles Memorial is a new addition to the Presbyterian Hospital, Philadelphia . . The Kingston (N. Y.) City Hospital is the recipient of $5000 from Mrs. John Wesley Shaw. . . The University Hospital, Kansas City, Mo., was slightly damaged by fire, recently.

Pharmacy for Women.—Moscow has inaugurated a course to train women to serve as prescription clerks and assistants in drug stores.—*St. Petersburg Med. Woch*,, Nov. 20, 1898.

Centenarians Rife.—The public prints, now that the century is nearing completion, are recalling much past history in the matter of incidents and localities by reports of decedents who have lived up to and beyond 100 years of age. The colored race in the main carry off the palm, perhaps according to Tesla's theory of sleepfulness and a happy indifference to worriment.

The Great Opportunity Neglected.—The *Philadelphia Medical Journal*, Vol. iii, No. 1, in a series of short editorials regarding medical grievances, makes not a few telling comments. A paragraph says: "It has become the fashion, this so-called nihilism; the rise of surgery, the reactions from quackery and over-drugging, have generated a false contempt of drugs that is as dangerous as the former extremes. It plays straight into the hands and pocket books of the nostrum folk. While we are physicians, curers and not preventers of disease, we must dispense, and not dispense with, drugs. Our duty is thus clear: more, not less, intellect; greater, not less, discrimination in clarifying the professional and legal conceptions as to the powers and uses of drugs." Much more as regards the "trade-mark abuse" is trenchantly and wisely said, but restricted space is a barrier against quotation.

Loss of Life Through the Christmas Tree.—Christmas has been followed this year, as always, by the arrival from many quarters of reports of panics, some fatal and all dangerous, resulting from the ignition of church Christmas trees by the candles used in their decoration. The peril arising from the close proximity of fire and fuel of the most inflammable sort has long been recognized, but the precautions taken are inadequate, as numberless tragedies have demonstrated, and it would seem that the time has come for compelling by law the adoption, at least in cases where the festal tree is to be surrounded by a crowd of people, of a safer illuminant than candles. The incandescent bulb supplies that safer illuminant. It is as convenient and more effective than its predecessor, and it is not so much more expensive as to warrant a refusal to make the change. The Christmas tree at home may set the house on fire, but it rarely causes loss of life, so its owners may be allowed to light it as they please. The Christmas tree of churches and societies, however, is another thing, and means to decrease its dangers may very properly be taken.—*New York Times.*

Condition of Troops at the Hawaiian Islands.—A Honolulu correspondent of the *Medical Record*, in commenting upon the physical condition of our troops at that place, makes statements that ought to be interesting reading to sundry officials in the War Department. He says that when the volunteers leave San Francisco on the transports their constitutions have already been undermined by the unaccustomed hardships of camp life, by forced marches, and by poor diet. While on shipboard, overcrowding and food both bad in quality and insufficient in amount, work further havoc among the men, and in almost every instance there have been well-developed cases of typhoid fever to be taken ashore when the islands are reached. The work began on the transports is continued on land. Honolulu is in the midst of a vast plain of alluvial soil. Its elevation above the sea is slight; its few sanitary devices are of the crudest character; the water-supply is of more than questionable purity, and malaria is so common that only people of strong natural immunity escape it. Indeed, the typic resident of the city shows the effects of this disease in complexion and bearing. Yet the climate of the island is good, and perfectly salubrious camping-grounds could easily have been found at comparatively short distances from the city. There seems to have been no attempt to do so. Instead, the soldiers have been kept in the town and its suburbs, and chiefly in Independence Park, a place of high repute—for malaria—and surrounded by morasses, ponds, and rice and banana fields. Bringing the seeds of typhoid with them, and occupying a site where people with little or no knowledge of hygienic principles have lived for many years, it is far from wonderful that the health of the American troops, stationed temporarily or permanently at Honolulu seems to discredit the familiar tales about the excellence of the Hawaiian climate.—*New York Times.*

The Quick Lunch.—According to an Englishman about to return to his own country—so characterized by a lay journalist in the gossip column of the *New York Times*—the Americans are not a nation of fast eaters. He says that "they may not sit at the table as long as some other nations do, but they take more time at the actual work of eating than the Germans or the English. They are very likely to get up and leave the table when they have finished, but when it comes to a question of slowness and deliberation in actual eating they are not behind any of the foreign nations, unless it be France. The fast eating tradition belongs to the school which taught that all Americans chewed tobacco and talked through their noses."

Difficulties of Practice in India.—Dr. Roger A. Chew, Calcutta, India (*Medical World*, Vol. xviii, No. 1), among other things writes that "Fuss is the religion of India. To 'cut a dash' and live at the rate of about $180 per mensem for nigh a twelve month before he secures his first patient from the 270,000 practitioners in competition, is the doom of the interloper. Calcutta alone contains 7000 to its 6,700,000 inhabitants, or one doctor to 957 persons, of whom at least 850 are too poor to pay for medical attendance. At least 450 of the Calcutta doctors draw government pensions or salaries which help them under-bid the non-official doctor in the field of private practice." The government assistant-surgeon, with a four dollar license, attends out-door calls for sixteen cents *per caput* outside his stated salary. In the Bengal province alone there are 417 government institutions giving attendance and medicines for the asking. Add to this that an American diploma is without a status, and the wide-spread belief that American physicians are too stupid to hold their own at home.

The Census of Japan.—A Tokio letter in the *Chicago Record* vouches for the subjoined official statistics for Japan, exclusive of Formosa, which have just been published and are as follows: Population: nobility, 4423; gentry, 2,089,124; commons, 41,135,306; total, 43,228,863; male, 21,823,651; female, 21,405,212; dwellings, 8,058,474. This shows an increase over 1896 of 53,625 in the number of dwelling-houses and 520,599 in population. The number of marriages for the period is 365,207, and of divorces 124,075. Those persons whose ages range from 100 to 110 number 257. The population of the principal cities is as follows: Tokio, 1,948,851; Hyogo (Kobe) 1,652,366; Osaka, 1,503,771; Kyoto, 957,260; Yokohama, 870,256; Nagasaki, 845,441.

Rabelais, Not Franklin.—Ford, in the December *Century*, in his article on "The Many-Sided Franklin," credits that American celebrity with the original statement that "There are more old drunkards than old doctors." To this as a counter-statement, Dr. Wm. Lee Howard, Baltimore, Md., in the *Philadelphia Medical Journal* quotes from Rabelais. Book I, Chapter xli, the following: "O rot your physicians," said the monk, "a hundred devils leap into my body if there be not more old drunkards than old physicians." As Rabelais died in 1553 and Franklin in 1790, we are more than gratified at the detection of the plagiarism, even at this late day.

Cincinnati.

Health Circular.—In order to prevent as far as possible the spread of contagious diseases, especially diphtheria, the following circular letter has been issued by the health department of this city:

1. The first culture must be made on the day the physician has notified this department that the patient has been dismissed.

2. If the examination of the culture is negative, the quarantine will be raised in fourteen days from the time of the examination. If the culture shows the Klebs Loeffler bacillus the physician will be informed and another culture must be made in not less than one week after the first culture. If still positive, weekly examinations must be made until negative results appear.

3. In any case where the physician in charge does not desire to make the culture for raising the quarantine the health department will make the culture.

Health Regulation.—A regulation of the Ohio State Board of Health relative to diphtheria and membranous croup orders: For the patient, isolation for fourteen days after recovery and disinfection of premises. For persons associated with or in the house with patient, quarantine until after death or recovery of the patient and disinfection of the premises.

Uncontrollable Epistaxis.—Uncontrollable epistaxis resulted in the death of a boy at the Cincinnati Hospital a few days ago. The blood count was remarkably low, 525,000 reds per cubic millimeter, whites were 7000.

Dr. Percy Ashburn, who recently passed as assistant-surgeon in the regular army, has been ordered to Manila.

Detroit.

For the City's Health.—The Scientific Committee of the Health Board of Detroit met on January 20. Dr. John Flinterman read an interesting paper on "Tuberculosis and Isolation," in which he laid special stress on the dangers which arise from deposits of sputum from diseased persons, which, after drying, are dangerous and are liable to be blown around and so disseminate consumption. Dr. A. W. Imrie offered a resolution that it be the sense of the committee that cases of tuberculosis should be reported (provided the names of the patients be kept secret), and the houses where there are such patients should be disinfected. The Board of Health and the Advisory Committee are agreed on the desirability of reporting cases of the disease and keeping statistics.

Medical Legislation.—There will be an effort made at the present session of the Michigan legislature to secure the passage of a bill for the establishment of a State examining board for physicians. A bill drafted by the secretary of the State Board of Health and adopted by the Board, will be presented and an effort made to have it enacted.

Washington.

WOMAN'S CLINIC.—The semi-annual meeting of the Board of Directors of the Woman's Clinic, was held January 7. The report showed for the past month that 222 patients were treated, of which 53 were new cases; 321 prescriptions were compounded and 64 operations performed. The Clinic has been in existence eight years, and has done an immense amount of work in its limited field—diseases of women and children. The directors intend to increase the scope of the hospital and make many and extensive improvements during the coming year. The attending staff is composed of women physicians, and is a credit to the medical profession of Washington.

PHYSICIANS APPOINTED.—Dr. James R. Church, who recently passed the examination and was appointed an assistant-surgeon, U. S. A., has been ordered from this city to Santiago de Cuba. . . Dr. S. Clifford Cox has been appointed surgeon, with the rank of lieutenant, in the District Naval Battalion. . . Dr. Molineaux Turner has been appointed an acting assistant-surgeon in the army, and assigned to duty at Atlanta, Ga. . . Dr. E. A. Gorman has been appointed resident physician at the Washington Asylum Hospital. . . Drs. Church and Turner were formerly resident physicians at the Central Dispensary and Emergency hospital.

RETURNED FROM PORTO PICO.—Dr. Wm. E. West, acting assistant-surgeon, U. S. A., formerly resident physician at the Central Dispensary and Emergency Hospital, has returned to the city. Dr. West contracted typhoid fever in the service at Porto Rico, but after a serious and prolonged illness has reported at the War Department for duty.

HEALTH OF THE DISTRICT.—The report of the health officer for the week ended January 14, shows the total number of deaths to have been 145. The principal causes of death were: Apoplexy, bronchitis, consumption, pneumonia, diseases of the brain, heartand kidneys, diphtheria, typhoid fever and grip. The total number of births reported was 90, of which 60 were white and 30 colored. There were 9 stillbirths, 5 white and 4 colored. At the close of the report there were 143 cases of scarlet fever and 74 cases of diphtheria under treatment. The Commissioners have acted favorably on the recommendation of the health officer and have recommended favorable action on the bill providing for the removal of weeds and rank vegetation in the District. The Commissioners point out the reasons why weeds subsequently decaying on vacant lots, become a menace to public health.

TO CHECK SMALLPOX.—The health officer has requested the Commissioners to urge a special appropriation of $5000 to be used in protecting the District against the introduction and spread of smallpox. He also asks for a special appropriation of $1000 for the prevention of the spread of scarlet fever and diphtheria. At present there is no smallpox in the District, but the presence of a number of cases in Alexandria and other adjacent points, has decided the possible introduction of the disease into Washington. Scarlet fever and diphtheria appear to be frequent, and the Health Department desires to be prepared for any and all emergencies. He requests that the appropriations be made immediately available.

FOR PUBLIC SAFETY.—The House District Committee, after a public hearing, have favorably reported House bill 11159 which provides for the protection of life and limb; that rapid transit street railways shall be equipped with safety brakes, The old hand brakes have proved unsatisfactory and some automatic apparatus, with the approval of the Commissioners is to be substituted.

ST. ELIZABETH'S HOSPITAL.—Dr. W. W. Godding, superintendent of the Government Hospital for the Insane, has requested the appropriation of $31,251 to construct cottage buildings for the accommodation of the large increase in patients. Dr. Godding says that since the beginning of the war with Spain, he has admitted 107 insane men from the Army and Navy. They include heroes of San Juan, Santiago and Manila, and he says he expects that at least 100 more cases will come in during the next fiscal year. He reports recovery in probably two-thirds of the cases and says there are now 1927 patients in the asylum, which is woefully crowded. Some of the patients are sleeping on cots in the hall-ways.

IMMUNE NURSES WANTED.—The Surgeon-General of the War Department wants more immune nurses for the yellow fever hospitals in Cuba. The force of female trained nurses in the island is something over two hundred. Yellow fever immunes only are now desired, and circulars are to be sent throughout the South in quest of applicants for such positions. All applications are to be addressed to the Surgeon-General's office, the applicant furnishing written indorsements from her physician, the wife of her pastor or her priest, as the case may be, and a health certificate.

ADULTERATED FOOD LAW.—Active war is being waged against the sellers of adulterated foods in the District. Quite a respectable number have recently been defendants in the police court. The principal commodities adulterated, or substituted for, include pepper, mustard, butter or oleomargarin, vinegars and candies. The imposition of fines is gradually driving the adulterations out of the Washington markets. In proof of this, the chemist of the Health Department says: "While it is true that there are a number of cases pending, fully 75 per cent. of the samples recently analyzed showed the articles to be pure; while former investigations showed about 75 per cent. of the samples were adulterated."

FREEDMAN'S HOSPITAL.—Representative Barrows of Massachusetts has introduced a bill to provide permanent and modern buildings for the Freedman's Hospital. It provides for an appropriation of $250,000 out of all moneys, arrears of pay, bounty and prize money, which are due the estates of deceased colored soldiers who served in the late Civil War and which were in the hands of the Commissioners of the Freedman's Bureau, and which have been covered in the U. S. Treasury. The site proposed is that now occupied by the Freedman's Hospital. The bill further provides that the new hospital shall be maintained as a National hospital.

THE DISTRICT APPROPRIATION BILL.—The District appropriation bill for the fiscal year ending 1900, includes the following items: For sweeping, sprinkling, etc., avenues and alleys, $19,500, clearing snow and ice, $4000, Washington aqueduct, 14,500; health department, salaries and expenses, $6720; Garfield and Providence Hospitals, maintenance of isolating wards, $4000; intercepting sewers, not exceeding $238,000. For additional amount to enable the proper officer of the government to make an investigation of the feasibility and propriety of filtering the water-supply of Washington and to submit to Congress a detailed report thereon, $5000; Freedman's Hospital, $54,000; Washington Asylum Hospital, furnishings, $4000; health department disinfecting service, $3000; gratuitous vaccination of indigent persons, $2000; Central Dispensary and Emergency Hospital, $17,000.

COLUMBIA HISTORICAL SOCIETY.—At the meeting of this Society, recently held, Dr. James Dudley Morgan was elected treasurer.

CENTRAL DISPENSARY AND EMERGENCY HOSPITAL.—At the recent meeting of the attending staff, the president, Dr. Burnett, read the report for the month of December: Total number of cases treated, 2423; dispensary, 1898; emergency, 525; total operations, 211; total number of ward cases, 51; prescriptions, 2835; ambulance calls, 73; number of deaths, 5; autopsies, 2.

EPISCOPAL EYE, EAR AND THROAT HOSPITAL.—At the annual meeting of trustees, the following were elected to membership on the Board of Trustees: Drs. W. H. Wilmer, C. H. Alden, U. S. A., F. P. Austin, Robert S. Chew, H. T. Frey, R. B. Mason and H. B. Noble. The annual report showed that 1279

patients were treated during the year, of whom 685 were white and 594 colored; 6237 visits were made; 173 patients were admitted to the house, 93 of whom were free and 80 pay patients; 225 operations were performed, of which 155 were on the eye; 80 operations were performed on the ear and 52 on the nose and throat. The treasurer's report shows $5,096.03 received and $4,632.50 expended during the year. One thousand eight hundred and seventy-three dollars and thirteen cents was collected by the Board of Lady Managers and $1,508 accrued from pay patients.

Philadelphia.

Dr. James Tyson will hereafter conduct his clinics at the Blockley Hospital.

Dr. Frank Haehlen has been elected a member of the Board of Trustees of the Samaritan Hospital.

Dr. J. Clifton Edgar, professor of obstetrics, Cornell, gave an address to students at Houston Hall, under the auspices of the Barton Cooke Hirst Obstetrical Society.

Dr. Norman Roberts, St. Timothy's Hospital, has been promoted to senior resident physician, vice Dr. Clarence Vary resigned.

Dr. J. William White made an address on January 17 before the New England Alumni of the University of Pennsylvania, having as guests representatives of the faculties and graduates of Harvard and Yale Colleges. The meeting was held largely in the interest of athletics and to promote a more friendly feeling among these different institutions regarding intercollegiate games.

Office Remodeled.—Drs. Alfred Stengel and William Pepper, Jr. have remodeled the office of Dr. William Pepper, deceased, at 1811 Spruce Street, for the care and treatment of the clientèle of their distinguished predecessor.

St. Timothy's Hospital.—Mr. Charles W. Gifford, treasurer of St. Timothy's Hospital, announces that up to date and from various sources a total of $6,234.50 has been received for the benefit of this institution.

Health Protective Hospital.—Some time ago an organization was effected for the establishment of this institution in this city, and the following officers were elected: President, Judge William Ashman; vice-president, Justus P. Strawbridge; secretary, Dr. Clara T. Dercum; treasurer, J. Madison Taylor; for directors for three years: Drs. Edwin Rosenthal, William T. Smedley, Edwin E. Graham; directors for two years, Drs. James Tyson and George M. Gould. In order that the hospital shall receive provisional requests a permanent site must be chosen before July next. It is stated that $35,000 is already in hand to begin work.

Woman's Hospital.—The report of the Board of Managers says: "In the late war the management was not unmindful of duty to tne Nation, and when the sick soldiers were brought to Philadelphia, although the practice theretofore had been to treat only women and children, the Woman's Hospital received ninety-seven of the sick soldiers into its wards, two died from the result of exposure, one from the effects of typhoid fever, and with the exception of two still convalescent, all have recovered." The report also stated that the clinical laboratory had been opened on December 1, and that the Maternity Hospital had been greatly improved during the past year.

Medico-Chirurgical College.—For several days past the Medico-Chirurgical College has been awaiting the ruling of the Supreme Court relative to the rights and powers of that Institution in conferring the degrees of Ph.D., Ph.G., and D.D.S. Several months ago this subject came up before Judge Gordon, who expressed the opinion that such right did exist in the granting of the original charter of the Hospital, and stated that a hospital training and medical education were more conducive to both dentistry and pharmacy. It is stated that there are now 103 students in dentistry, 26 in pharmacy, and if the Supreme Court should rule adversely these men would necessarily be deprived of an entire year of professional studies. The Philadelphia Dental College, according to Dr. J. V. Shoemaker, is the one carrying on the fight against the Medico-Chi.

Grippe Fast Disappearing.—Grippe, which has been epidemic in the city for the past few weeks, now shows signs of abatement, as proved by the mortality statistics for the week just closed, there being a total of 586 deaths against 642 for last week. Of the total number of deaths, 136 occurred in children under the age of five years.

Results of Meat Inspection.—During the year 12 persons have been arrested for selling food from the slaughter-houses; 135,843 cattle and 53,505 calves were inspected, but of this number 230 cattle were condemned, 219 being affected with tuberculosis, 2 with actinomycosis and 9 for causes not mentioned.

Bells on Horses.—One of the latest fads in this city is to have bells on the doctors' horses. Since it is now possible to place rubber shoes on horses and rubber tires on the wheels of carriages, very little noise is in consequence made on our well-paved streets. Therefore, in order to give warning to pedestrians, a number of leading physicians have adopted the English custom of attaching small sleigh bells to the collars of the carriage animals.

Case of Yellow Fever.—Another patient suffering from yellow fever was brought to this port a few days ago on board a vessel arriving from Norfolk, Va. The case was promptly diagnosed by the Government authorities, the patient taken to the Municipal Hospital and the vessel thoroughly disinfected. Two cases of yellow fever are now in the Municipal Hospital of this city.

Smallpox in Philadelphia.—About two weeks ago, as has been previously reported, two cases of smallpox developed in this city and were promptly taken to the Municipal Hospital. This week four other members of the same family showed unmistakable evidence of the disease. A few days later two other cases developed in a section of the city quite remote from the others, and were taken to the Municipal Hospital. During the week the steamer *J. B. Sunderland* arrived, having on board a sailor suffering from the disease, and was taken in charge by the United States Marine-Hospital department of this city. All infected foci have been thoroughly cleansed and fumigated, and physicians generally have been warned to report any suspicious cases. The cases are said to be of a very mild type.

Circular Regarding Smallpox.—An appeal has been made to all local boards to at once take the necessary safeguards against the spread of the disease: 1, by vaccination of all school children; 2, by the free vaccination of all who are unable to pay; by appeals to the general public to give themselves this protection; 4, by warning the public not to expose themselves unnecessarily; 5, by providing proper disinfecting apparatus for the different boards of health; by providing a suitable "contagious disease hospital" in each locality; 7, by adoption of regulations requiring all physicians to promptly report all suspicious cases, as well as to enforce a thorough quarantine in all infected localities.

Milk-Supply.—Mr. W. J. Burns, chief inspector of milk, has filed his annual report, which shows that during 1898 33,555 inspections were made; 468,309 quarts of milk were examined, of which 5710 quarts or 1.21 per cent. were condemned for adulteration with water and 2680 were "skimmed." The good effects of a thorough inspection is shown by the following percentages of adulterated milk from year to year as follows: 1892, 11.15 per cent.; 1893, 6 per cent.; 1894, 3.82 per cent.; 1895, 4.29 per cent.; 1896, 3.81 per cent.; 1897, 2.38 per cent.; 1898, 1.78 per cent.; thus showing a gradual decline in the percentages of adulterated milk. The report also adds that the time-honored method "of cooling milk by the addition of water" has been superseded by safer methods. Recent

analysis of the milk found in the wagons and shops shows the average to be 13.09 per cent. total solids, 4.05 per cent. of fat and 9.04 per cent. solids not fat. Attention has been called to the practice of adding chemicals to the milk to prevent souring and to reduce the expense of ice bills. In thirty-four instances in which persons have been indicted for this practice, seventeen pleaded guilty, two were convicted, two were discharged and twenty-one are still pending.

THE PUBLIC SERVICE.

Movements of Army Medical Officers under orders from the Adjutant-General's office to January 18, 1899.

To Manila, P. I.: Acting Asst.-Surgeon Chas. H. Andrews from Huntsville, Ala., to San Francisco, Cal., to accompany troops sailing on the first transport. Acting Asst.-Surgeons Stephen M. Long and Arlington Pond, the former from Baltimore, Md., the latter from duty at the general hospital, Ft. Myer, Va., to New York City to accompany troops sailing on the first transport. Acting Asst.-Surgeon Louis W. Bishop, to New York City to accompany troops sailing on the transport "Grant."

To Havana, Cuba: Acting Asst.-Surgeons F. Medina Ferrer and José M. Delgada, the former from duty in Pinar del Rio, the latter from Ft. Riley, Kan.

To hospital duty: To the Josiah Simpson Hospital, Ft. Monroe, Va., Acting Asst.-Surgeon Chas. B. Mittelstaedt from the transport "Mobile" at New York City.

To special duty: Major Edward O. Shakspeare, brigade surgeon Vols., to Philadelphia, Pa., on official business pertaining to the inspection of certain apparatus for the sterilization of water submitted by the Waterhouse Forbes Company.

Leave of absence granted: Acting Asst.-Surgeon E. S. Grigsby, to report to the Surgeon-General at its expiration.

Sick leave granted or extended: Major Geo. E. Lyon, 3d U.S. Vol. Engineers, and Acting Asst.-Surgeon Henry P. De Forest.

Resigned: Major J. Lewis Strodes, surgeon 4th Pa. Infantry, and Lieut. Wm. F. Dailey, asst.-surgeon 3d W. Va. Infantry.

Movements of Navy Medical Officers.—Changes in the medical corps of the U.S. Navy for the week ending Jan. 21, 1899.

Surgeon J. C. Byrnes, ordered to additional duty on board the "Puritan," Jan. 14.

Asst.-Surgeon W. M. Garton, detached from the "Supply" when put out of commission, and ordered to the Washington Navy Yard, Jan. 14.

Asst.-Surgeon F. M. Blackwell, detached from the "Vixen" and ordered to the "Franklin," Jan. 14.

Surgeon J. R. Waggener, order of Jan. 3, detaching from the Mare Island navy yard and ordering to Washington, D.C., amended; ordered to be examined at Washington, D.C., and then home to wait orders, Jan. 16.

Surgeon S. H. Griffith, detached from the "Mayflower" when put out of commission, and ordered home to wait orders, Jan. 19.

P. A. Surgeon G. H. Barber, detached from the "Glacier" when put out of commission, and ordered to the naval academy Jan. 19.

P. A. Surgeon C. F. Stokes, ordered to the naval hospital, New York City, Jan. 19.

Asst.-Surgeon R. C. Holcomb, detached from the naval academy and ordered to the Washington navy yard, Jan. 19.

Marine-Hospital Changes.—Official List of Changes of Stations and Duties of Commissioned and Non-Commissioned Officers of the U.S. Marine-Hospital Service, for the seven days ended Jan. 19, 1899.

P. A. Surgeon C. P. Weternbaker, to proceed to Clinton, Ga., for special temporary duty, Jan. 14, 1899.

P. A. Surgeon C. H. Gardner, to report at bureau for special temporary duty, Jan. 14, 1899.

Appointment: Geo. A. Gregory of Maine, to be acting asst.-surgeon at Boothbay Harbor, Me., Jan. 14, 1899.

Board Convened.—A board of officers will be convened at the U.S. Marine-Hospital, Chicago, Ill., Feb. 14, 1899, for the purpose of examining candidates for admission to the grade of assistant-surgeon in the U.S. Marine-Hospital Service.

Candidates must be between 21 and 30 years of age, graduates of a respectable medical college, and must furnish testimonials from responsible persons as to character.

The following is the usual order of the examination: 1. Physical. 2. Written. 3. Oral. 4. Clinical.

In addition to the physical examination, candidates are required to certify that they believe themselves free from any ailment which would disqualify for service in any climate.

The examinations are chiefly in writing, and begin with a short autobiography by the candidate. The remainder of the written exercises consists in examination on the various branches of medicine, surgery and hygiene.

The oral examination includes subjects of preliminary education, history, literature and natural sciences.

The clinical examination is conducted at a hospital, and when practicable the candidates are required to perform surgical operations on the cadaver.

Successful candidates will be numbered according to their attainments on examination, and will be commissioned in the same order as vacancies occur.

Upon appointment the young officers are, as a rule, assigned to duty at one of the large marine-hospitals, as at Boston, New York, New Orleans, Chicago or San Francisco.

After five years' service, assistant-surgeons are entitled to examinations for promotion to the grade of passed assistant-surgeon.

Promotion to the grade of surgeon is made according to seniority, and after due examination, as vacancies occur in that grade. Assistant-surgeons receive $1600, passed assistant-surgeons $2000, and surgeons $2500 a year. When quarters are not provided, commutation at the rate of $30, $40 or $50 a month, according to grade, is allowed.

All grades above that of assistant-surgeon receive longevity pay, ten per centum, in addition to the regular salary for every five years' service, up to forty per centum after twenty years' service.

The tenure of office is permanent. Officers traveling under orders are allowed actual expenses. For further information, or for invitation to appear before the board of examiners, address Supervising Surgeon-General, U.S. Marine-Hospital Service.

Detail for board: Surgeon Henry W. Sawtelle, chairman; Surgeon Chas. E. Banks, P. A. Surgeon; S. O. Cobb, recorder.

CHANGE OF ADDRESS.

Adams, C. S., from Wallastown, Mass., to Pinehurst, Fla.
Beem, E. D., from 1117 Holmes to 1301 E. 8th, Kansas City, Mo.
Barbour, L. P., from Tullahoma, Tenn., to Boulder, Colo.
Booth, F. H., from 662 Cortez St. to 281 W. North Av., Chicago.
Durant, G., from 12 W. 46th St., New York City, to Tampa Bay Hotel, Tampa, Fla.
Fellman, G. H., from Jersey City, N. J., to 906 North Av., Milwaukee.
Grier, M. J., from Philadelphia, Pa., to Apartado 38, Guadalajara, Mex.
Hamilton, E. M., from Fairmont to Cairo, W. Va.
Hamly, L. B., from 1349 California St. to 1731 Emerson Av., Denver, Colo.
Hodgkinson, C., from 416 E. Cross St. to 317 Hamilton St., Ypsilanti, Mich.
Holman, C. J. Johnson, from 626 to 536 Monroe St., Chicago.
Loeb, Leo, from 6329 Woodlawn to 5601 Washington Av., Chicago.
Maus, L. M., from Ft. Hamilton, N.Y., to 7th Army Corps, Havana, Cuba.
Mears, D. W., from Ashland to 420 Connell Bldg., Scranton, Pa.
Miner, A. G., from Niles to Warren, Ohio.
McCarthy, J., from Taylor's Gin to Briggs, Texas.
McCown, Dr., from Chalfin Bridge, Ill., to Windsor, Mo.
Neyman, E. H., from Mack Blk. to 1100 National Av., Milwaukee, Wis.
Reed, J. H., from Hammond to Monticello, Ind.
Reeve, D. N., from Allison to Hampton, Iowa.
Schaefer, T. C., from 547 to 582 Washington, Blvd., Chicago.
Small, J. W., from Boston, Mass., to 25 St. James Av., North Tarrytown, N. Y.
Sheley, P. A., from 607 5th St. to 706 6th St., Louisville, Ky.
Shortridge, W. R., from La Plata to Meadville, Mo.
White, S. M., from Chicago to State Univ., Minneapolis, Minn.
Wolfe, L. E., from Kinzers to Freeburg, Pa.

LETTERS RECEIVED.

Allen, P. M., St. Johnsbury, Vt.; Andrews, R. H., Philadelphia, Pa.; Applegate, J. C., Bridgeton, N. J.; Arnold, P., Elizabeth, Ill.; Atkinson, W. B., Philadelphia, Pa.

Bates, W. G., Sapulpa, I. T.; Baxter, J. H., Columbus, Kan.; Beise, C. J., Tracy, Minn.; Beeson, H. A., Leesburg, Ohio; Beveridge, T. F., Bridgewater, S. D.; Blakiston's, P., Son & Co., Philadelphia, Pa.; Bogie, M. A., Kansas City, Mo.; Bower, W. C., Box 173, Lebanon, Kan.; Boyd, W. J., Macon, Ga.; Boyles, J. M., Flora, Ill.; Brothers, Samuel, New York City; Brunson, R. (2), Hot Springs, Ark.; Bryant, Grace W., Chicago; Bryant, B. L., Edom, Texas.

Cable, C., Kansas City, Mo.; Carveth, J. A. & Co., Toronto, Canada; Cheney, J. Y. (2), Chicago; Chicago Times-Herald, The, Chicago; Clark, M. E., Chatham, N. Y.; Clendenin, Wm., Cincinnati, Ohio; Cornell, C. W., Knoxville, Iowa; Coulter, C. W., Oil City, Pa.; Cowgill, W. M., Paducah, Ky.; Crouse, D. H., Chicago.

Dalton, W. R. Inge, New York City; Dorr, H. I., Boston, Mass.; Duquesne Distributing Co., Harmarville, Pa.; Durant, G., New York City.

Eclipse Bicycle Co., Elmira, N. Y.; Electro-Medical Mfg. Co., Chicago; Elliott, H. G., New York City; Etnier, Frederick, Huntington, Pa.

Fellman, G. H., Milwaukee, Wis.; Felmlee, S. T., Chicago; Ferguson, L., Frontier, Mich.; Fettonash, D., Des Moines, Iowa; Fitch, W. E., Savannah, Ga.; Fithian, P. H., Springfield, Ill.

Gardner, R. W., New York City; Gessner, H. B., New Orleans, La.; Gould, G. S., Sully, Iowa; Grace, J., Belleville, Ark.; Graham, H. G., Chicago; Griffin, L. M., Boulder, Colo.

Hamilton, E. M., Cairo, W. Va.; Hatfield, J. H., Flat Rock, Ky.; Haw, U. P. (2), Commerce, Mo.; Henry, C. W., Coon Rapids, Iowa; Herzog, M., Chicago; Hodgkinson, C., Ypsilanti, Mich.; Hoffman, J. R., Chicago; Hummel Adv. Agency, A. L., New York City.

Jacobs, R. H., Stone Church, Ill.; Jones, W. D., Devil's Lake, N. D.

Karger, S., Berlin, Germany; Kellogg Sanitas Co., Battle Creek, Mich.; Kester, A. J., Ft. Wayne, Ind.; Keyes, Thomas B., Chicago; Kimmons, S. H., Tulsa, I. T.; Knox, J. W. T., care Fred. Stearns & Co., Detroit, Mich.; Kreider, G. N., Springfield, Ill.

Latimer, J. A., Mayfield, Ohio; Lebensohn, M. H., Jamestown, Tenn.; Lentz, Chas. & Son, Philadelphia, Pa.; Lincoln, B. S., Missouri City, Mo.; Loughridge, Wm. E., Mansfield, Ohio.

Martin, J. M., Massey, Texas; Matas, R., New Orleans, La.; Mayo, H. N., De Lemar, Nev.; Meyers, S. N., Martinsburg, W. Va.; Merck & Co. (2), New York City; Merrifield, O. G. & Co., Chicago; Meyen, C. & Co., New York City; Mogk, W. A. (2), Ann Arbor, Mich.; Mulford, H. K. Co. (2), Philadelphia, Pa.; Munroe, J. P., Davidson, N. C.; McArthur Hypophosphite Co., Ansonia, Conn.; McCullough, G. T., Missoula, Mont.; McCullough, M. F., Missoula, Mont.; McEwen, E. L., Chicago; McLain, W. H., Wheeling, W. Va.

Orvis, E. J., Oakfield, Wis.; Oppenheimer, S. & Co., New York City.

Parke, Davis & Co., Detroit, Mich.; Parrington, J. M., Durango, Colo.; Paul E. Derrick Adv. Agency, New York City; Peavy, J. F., Asheville, N. C.; Petra, F. J., Chicago; Piper, J. N., Shumway, Ill.; Pillsbury-Washburn Flour Mills Co. (Ltd.), Minneapolis, Minn.; Prentiss, D. W., Washington, D. C.; Proctor & Collier Co., Cincinnati, Ohio; Puloola Chem. Co., New York City; Pusey, H. M., Louisville, Ky.

Reeve, M. V. N., Hampton, Iowa; Reeve, D. N., Hampton, Iowa; Richardson, F. W., St. Paul, Minn.; Richardson, M. H., Boston, Mass.

Sahud, M., Chicago; Saunders, W. B., Philadelphia, Pa.; Schoolfield, C. B., Dayton, Ky.; Schuster, Ed. & Co., Milwaukee, Wis.; Shattuck, S. W., Champaign, Ill.; Sheppard, E. S., Knoxville, Tenn.; Sieffert, A. H. H., Louisville, Ky.; Sillito, W. H., Xenia, Ohio; Smart, W. M., Muskegon, Mich.; Smith, H. H. Vincennes, Ind.; Smith, J. Whitefield, Bloomington, Ill.; Smith, D. D., New Richland, Minn.; Smith, Gould, Broadlands, Ill.; Smith, Q. C., Austin, Texas; Smith, Thad. (2), Ashton, Ill.; Somers, A. B., Omaha, Neb.; Squier, A. O., Springfield, Mass.; Staples, M. M., Macon, Ga.; Starr, O. F. Hills, Minn.; Stearns, F. & Co. (2), Detroit, Mich.; Streets, D. R., Bridgeton, N. J.; Stephenson, R. A., Manchester, Ohio; Sutphin, P. C., Hardyville, Ky.

Thomas, J. D., Washington, D. C.; Torrey, Mrs. C., Rochester, Mich.

Upham, J. H. J., Columbus, Ohio.

Vinnedge, W. W., LaFayette, Ind.

Whalen, C. J., Chicago; Wheeler, R. H., Chicago; Widmer, W. A., Philadelphia, Pa.; Williams, E. B., Boston, Mass.; Wingate, U. O. B., Milwaukee, Wis.; Winters, J. E., New York City; Woodbury, F., Philadelphia, Pa.; Woodruff, T. A., Chicago; Woodruff, E. W., Columbus, Ohio; Woldert, A. E. (3), Philadelphia, Pa.

Yandall, Fanny C., Louisville, Ky.; Yates, H. W., Detroit, Mich.; Young, S. J., Terre Haute, Ind.; Yucca Mfg. Co., Jackson, Mich.